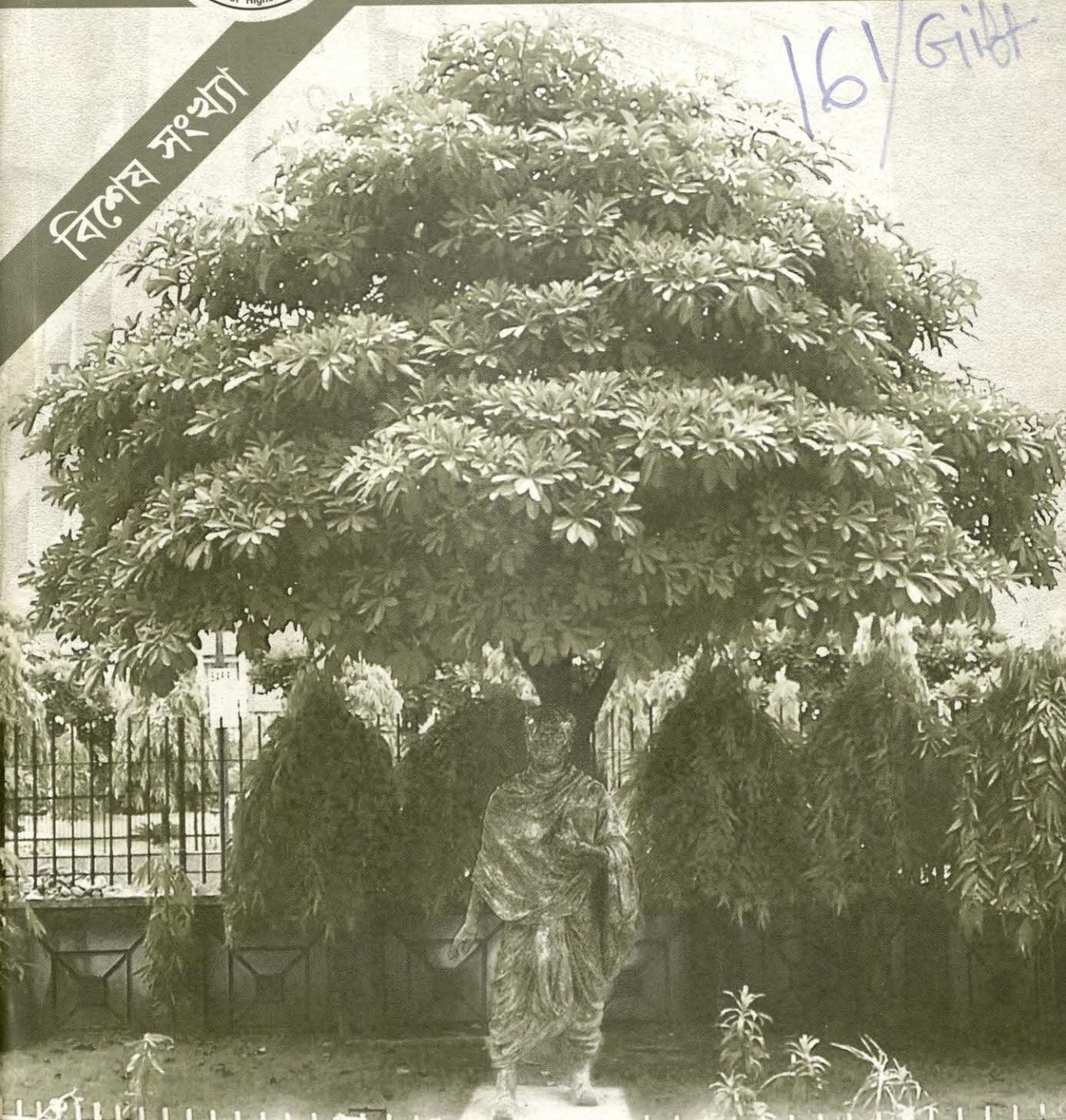
আগস্ট
২০০৫
সংসদ পরিচিতি
বিশেষ সংখ্যা
West Bengal Council of Higher Secondary Education
পশ্চিমবঙ্গ উচ্চ মাধ্যমিক শিক্ষা সংসদ

Saṃsad Pariciti

Editor

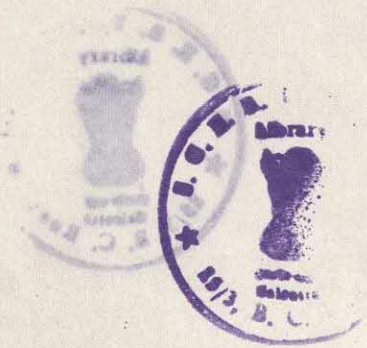
Dr. Debasish Sarkar

West Bengal Council of Higher Secondary Education

Saṃsad Pariciti, August 2005

Published in August 2005

Published by
Debasish Sarkar, Secretary
West Bengal Council of Higher Secondary Education
Vidyasagar Bhavan, 9/2 Block–DJ, Sector-II
Salt Lake City, Kolkata–700091

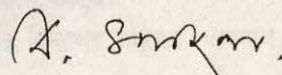
Price : Rs. 60.00 only

Printed at
Arunima Printing Works
81 Simla Street
Kolkata 700 006

CONTENT

ঘরের মেয়েরা প্রতিদিন বিশ্বের মেয়ে হয়ে দেখা দিচ্ছে। এই উপলক্ষে মানুষের সৃষ্টিশীল চিত্তে এই-যে নূতন চিত্তের যোগ, সভ্যতায় এ আর-একটি তেজ এনে দিলে। আজ এর ক্রিয়া প্রত্যক্ষে অপ্রত্যক্ষে চলছে। একা পুরুষের গড়া সভ্যতায় যে ভারসামঞ্জস্যের অভাব প্রায়ই প্রলয় বাধাবার লক্ষণ আনে, আজ আশা করা যায় ক্রমে সে যাবে সাম্যের দিকে। প্রচণ্ড ভূমিকম্প বার বার ধাক্কা লাগাচ্ছে পুরাতন সভ্যতার ভিত্তিতে। এই সভ্যতায় বিপত্তির কারণ অনেক দিন থেকে সঞ্চিত হয়ে উঠছিল, অতএব ভাঙনের কাজ কেউ বন্ধ করতে পারবে না। একটি মাত্র বড়ো আশ্বাসের কথা এই যে, কল্পান্তের ভূমিকায় নূতন সভ্যতা গড়বার কাজে মেয়েরা এসে দাঁড়িয়েছে — প্রস্তুত হচ্ছে তারা পৃথিবীর সর্বত্রই।

রবীন্দ্রনাথ ঠাকুর

From the Editor's Desk

At the outset I wish to express my regret about the time-lag regarding the publication of the '*Sansad Parichiti*'. This mouthpiece of the West Bengal Council of Higher Secondary Education is indispensable for effective dissemination of information to the schools relating to the activities of the Council. I believe that this publication is one of the best ways to channelise information for better coordination of the teaching-learning process and for managerial functioning of the system of Higher Secondary schools.

The essence of all the studies conducted by commissions starting from the Kothari Commission to Jaswant Committee is that with the explosion of knowledge there has been concomitant increase of burden in the curriculum, which enhances the stress related to examinations. Therefore, the need of the hour is to formulate a suitable strategy to look into this problem by careful intervention, keeping in mind the fast changing scenario at the level of school education. In view of the new approach to the class XI and class XII courses this issue is important in that it presents the re-structured syllabi of fifty-four subjects of the Higher Secondary course taught under the General Stream.

The theme of this issue is 'LEARNING WITHOUT BURDEN'. Any structural shift with such a positive objective has its pain and pleasure. We are confident that all concerned will be with us to strengthen our move in the interest of the students.

I wish to thank most sincerely all the Subject Experts involved in the process of re-structuring the syllabi. I am deeply indebted to all my colleagues at the council, without whose cooperation this work would not have been possible. A word of special thanks goes to our friends at M/s. Arunima Printing Works for their sincere help in bringing out this publication on time.

Many persons, too innumerable to be individually named, have offered me their most valuable and timely help, without which it would have been impossible to bring out this issue within such a short time. I gratefully record here my sincere acknowledgment of their help.

I wish to add that the Council looks forward to your constructive criticism to help it reach higher goals in future.

D. Sarkar.

(Debasish Sarkar)
Editor

যিনি বিজ্ঞানের একনিষ্ঠ সেবক তিনি ধীরভাবে ভ্রমপ্রমাদ যথাসাধ্য পরিহার করে সত্যের সন্ধান করেন, প্রবাদকে প্রমাণ মনে করেন না, প্রচুর প্রমাণ না পেলে কোনো নূতন সিদ্ধান্ত মানেন না, অন্য বিজ্ঞানীর ভিন্ন মত থাকলে অসহিষ্ণু হন না, এবং সুপ্রচলিত মতও অন্ধভাবে আঁকড়ে থাকেন না, উপযুক্ত প্রমাণ পেলেই বিনা দ্বিধায় মত বদলাতে পারেন।

রাজশেখর বসু

এই কথাটিই আপনাদের স্মরণ করিয়ে দিতে চাই যে, আমরা শুধু হিন্দু ও মুসলমান নই — আমরা মানুষ। সেই মানুষের অনন্ত দুঃখ, অনন্ত সুখ, অনন্ত রূপ। সে আজ আমাদের সামনে অস্পৃশ্যঅন্ত্যজরূপে এসেছে। মহাপ্রেমিকরূপে এসেছে, হিন্দু-মুসলমান-খ্রিস্টান রূপে এসেছে। কিন্তু শুধু এই-ই তার চরম অভিব্যক্তি নয়, মানুষের ইতিহাসের ধারা এইখানে এসেই থেকে যায়নি। মানুষের নব নব দুঃখ, নব নব সুখ, নব নব রূপ, কালের পর্যায়ে পর্যায়ে আমাদের সামনে উদ্‌ঘাটিত হচ্ছে। সে-সমস্তের দিকে যদি আমরা না-তাকাই, শুধু হিন্দু ও মুসলমান মানুষের এই কোনো একটা যুগের রূপকে তার চরম রূপ বলে মনে করি, তবে এই পরিচয়ই দেওয়া হবে যে, আমরা অন্ধ।

কাজী আবদুল ওদুদ

সভাপতির কলমে

'সংসদ পরিচিতি'র এই সংখ্যার জন্য লিখতে বসে মনের পটে ভেসে উঠছে পশ্চিমবঙ্গের পরিচিতি প্রিয় মানচিত্রখানি। রাজ্যের নানা প্রান্তে ছড়িয়ে আছে উচ্চ মাধ্যমিক বিদ্যালয়, পর্বত থেকে সমুদ্র পর্যন্ত নানা ভৌগোলিক বৈচিত্র্যের কোণে কোণে অবস্থিত এইসব বিদ্যালয়ের মাননীয় শিক্ষক শিক্ষিকাদের সঙ্গে, স্নেহাস্পদ ছাত্রছাত্রীদের সঙ্গে উচ্চ মাধ্যমিক শিক্ষা সংসদের যোগাযোগের প্রধান একটি মাধ্যম এই পত্রিকা। নানা কারণে এই পত্রিকার নিয়মিত প্রকাশ কিছুকাল সম্ভব হয়ে ওঠেনি। তার জন্য আমরা আন্তরিক দুঃখিত। তবে অত্যন্ত গুরুত্বপূর্ণ তাৎপর্যময় একটি সংখ্যা প্রকাশের মধ্য দিয়ে সংসদ পরিচিতির পুনর্যাত্রা শুরু হল। এই প্রয়াসকে অব্যাহত রাখার জন্য আমাদের নিরন্তর চেষ্টা থাকবে।

উচ্চ মাধ্যমিক শিক্ষাক্রমের একটি অনন্যতা আছে। সামগ্রিক শিক্ষার প্রেক্ষিতে এই স্তরটির সমধিক গুরুত্ব কেউ-ই অস্বীকার করতে পারবেন না। এই পর্যায়টি উচ্চশিক্ষা ও বৃত্তি নির্বাচনের তোরণ স্বরূপ। উচ্চমাধ্যমিকের পাঠক্রমের দিকে তাকালেই আমরা বুঝতে পারব সাম্প্রতিক কালের জ্ঞান-বিস্ফোরণের প্রতিফলন তাতে সংগত ভাবেই পড়েছে। জ্ঞানভাণ্ডারের এই প্রসারণ ও অফুরন্ত তথ্যপুঞ্জ কয়েকদশক আগেও অভাবনীয় ছিল। একদিকে এই জ্ঞানকে পাঠক্রমে পরিসর দেওয়া, অন্যদিকে অনাবশ্যক ভার বর্জন করা এই দুটি দিকে ভারসাম্য রেখেই সংসদ উচ্চ মাধ্যমিকের পরিমার্জিত পাঠক্রম বর্তমান শিক্ষাবর্ষ থেকে চালু করেছে। ২৭টি বিষয়ে পরিমার্জন ঘটেছে এবং অন্যান্য বিষয়গুলিতেও পরিকল্পনামাফিক পর্যায়ক্রমে পরিস্থিতির চাহিদা অনুযায়ী পরিমার্জনের ইচ্ছা সংসদের আছে। পশ্চিমবঙ্গের বৃহত্তর শিক্ষকসমাজ, শিক্ষাবিদরা পরিমার্জন প্রক্রিয়ায় সক্রিয় অংশগ্রহণ করেছেন। সংসদ তার জন্য কৃতজ্ঞ। তাঁদের এই প্রয়াসের ফলে পশ্চিমবঙ্গের ছাত্রছাত্রীরা প্রভূত সুফল পাবে।

পাঠক্রম, পঠনপাঠন ও মূল্যায়ন এগুলি পরস্পরের সঙ্গে অঙ্গাঙ্গীভাবে জড়িত। প্রতিটি স্তরেই গঠনমূলক চিন্তা ও সময়োপযোগী পরিবর্তন সার্বিক মানোন্নয়ন সম্ভব করে তুলতে পারে, প্রকৃতপক্ষে এটি একটি ধারাবাহিক প্রক্রিয়া। পরিবর্তিত পরিস্থিতির সঙ্গে সংগতি রেখে ক্রমোন্নয়নের দিকে সর্বদাই দৃষ্টি দেওয়া দরকার। সমকালীন আর্থসামাজিক পরিস্থিতির পাশাপাশি জাতীয় প্রেক্ষাপটও বিবেচনার মধ্যে রাখতে হবে। আমাদের রাজ্যে উচ্চ মাধ্যমিক পাঠক্রম ও পরীক্ষা বিভাজন নিয়ে শিক্ষাবিদ, শিক্ষক, শিক্ষাকর্মীদের মধ্যে একটি ভাবনা চলছিল। পরিশেষে পাঠক্রম ও পরীক্ষা বিভাজিত করার সিদ্ধান্ত হয়েছে। বিভিন্ন স্তরে বিস্তৃত আলাপ আলোচনার ফলেই এই সিদ্ধান্তে পৌঁছনো সম্ভব হয়েছে। এর ফলে বৃহদায়তন পাঠক্রমের ভার লাঘব হবে এবং নির্বাচিত বিষয়ের উপর (সাজেশনস) ঝোঁক দেওয়ার বদলে ছাত্রছাত্রীরা পাঠক্রমের নিবিড় পাঠে মন দেবার সুযোগ বেশি পাবে। পাঠ্যসূচির এই গঠনগত পরিবর্তনের ফলে প্রথম পত্র ও দ্বিতীয় পত্রের ধারণা আর থাকছে না, সমস্ত পাঠক্রমটি একাদশ ও দ্বাদশ শ্রেণির মধ্যে বিভক্ত হয়েছে। পরিবর্তনের সূত্রগুলি পর্যায়ক্রমে বিন্যস্ত হল।

১। ২০০৫ - ২০০৬ শিক্ষাবর্ষ থেকে উচ্চ মাধ্যমিক পরীক্ষা দুটি অংশে বিভাজিত হবে। একটি অনুষ্ঠিত হবে একাদশ শ্রেণির অন্তে, অন্যটি দ্বাদশ শ্রেণির অন্তে।

২। একাদশ শ্রেণির অন্তে অনুষ্ঠিতব্য পরীক্ষাটি একাদশ শ্রেণির জন্য নির্দিষ্ট পাঠক্রমের উপর ভিত্তি করে বিভিন্ন বিদ্যালয় গ্রহণ করবে। একাদশ শ্রেণির পাঠক্রম সংসদ নির্দিষ্ট করে দেবে। দ্বাদশ শ্রেণির অন্তে অনুষ্ঠিতব্য পরীক্ষাটি দ্বাদশ শ্রেণির জন্য নির্দিষ্ট পাঠক্রমের উপর ভিত্তি করে সংসদ গ্রহণ করবে। দ্বাদশ শ্রেণির পাঠক্রম সংসদ নির্দিষ্ট করে দেবে। দ্বাদশ শ্রেণির পরীক্ষার ফল সংসদ কেন্দ্রীয়ভাবে প্রকাশ করবে।

৩। একাদশ শ্রেণির প্রশ্নপত্র রচনার দায়িত্ব সংসদের কিন্তু উত্তরপত্র পরীক্ষার দায়িত্ব বিদ্যালয় সমূহের। একাদশ শ্রেণির পরীক্ষার ফলও বিদ্যালয়গুলিই প্রকাশ করবে।

৪। একাদশ শ্রেণির পরীক্ষা সময়সূচি সংসদ ঘোষণা করবে। দ্বাদশ শ্রেণির পরীক্ষার সময়সূচি প্রতিবৎসর সংসদ যথা নিয়মে ঘোষণা করবে।

৫। একাদশ শ্রেণির পরীক্ষায় ছাত্রছাত্রীদের প্রাপ্ত নম্বর বিভিন্ন বিদ্যালয়ের প্রধান শিক্ষক/শিক্ষিকারা সংসদে পাঠাবেন, কিন্তু উচ্চ মাধ্যমিক পরীক্ষার দ্বাদশ শ্রেণির মার্কশিটে একাদশ শ্রেণির কোনো নম্বরের উল্লেখ থাকবে না।

৬। একাদশ শ্রেণিতে ৬টি বিষয়ে বিষয়পিছু ১০০ নম্বর করে মোট ৬০০ নম্বরের পরীক্ষা হবে। দ্বাদশ শ্রেণিতে ৬টি বিষয়ে, বিষয়পিছু ১০০ নম্বর করে মোট ৬০০ নম্বর এবং পরিবেশ শিক্ষার ১০০ নম্বর মোট ৭০০ নম্বরের পরীক্ষা হবে, তবে পরিবেশ শিক্ষার নম্বর মার্কশিটে পৃথকভাবে দেখানো হবে।

একদশ ও দ্বাদশ শ্রেণির বিভাজিত পাঠক্রম এই সংসদ পরিচিতিতে সন্নিবিষ্ট হল। সিলেবাস কমিটির মাননীয় সদস্যরা পাঠক্রম বিভাজনের একটি প্রধান রূপরেখা তৈরি করে দিয়েছেন, সেই ছকটিকে মনে রেখে বোর্ড অফ স্টাডিজের মাননীয় সদস্যরা এই বিভাজনের দায়িত্ব পালন করেছেন। দুই কমিটির সমস্যদের আমাদের আন্তরিক কৃতজ্ঞতা জানাই। তাঁদের সুকঠোর পরিশ্রমের ফলে পশ্চিমবঙ্গের ছাত্রছাত্রীদের হাতে বিভাজিত পাঠক্রম সংসদ পৌঁছে দিতে পারল।

ইতোমধ্যে উচ্চ মাধ্যমিকের সঙ্গে সংশ্লিষ্ট যে সরকারি আদেশনামাগুলি বেরিয়েছে তা এই সংসদ পরিচিতিতে সকলের অবগতির জন্য সংযুক্ত হল।

সর্বোচ্চ ন্যায়ালয়ের নির্দেশক্রমে প্রতিবৎসর ভারতের সব বোর্ড/কাউন্সিলকে ১০ জুনের মধ্যে উচ্চ মাধ্যমিক পরীক্ষার ফল প্রকাশ করতে হবে এবং ১৫ জুনের মধ্যে মার্কশিট ছাত্রছাত্রীদের হাতে তুলে দিতে হবে। এই বৎসর শুধুমাত্র পশ্চিমবঙ্গের ক্ষেত্রে নির্দেশটি কার্যকর ছিল না। কিন্তু সংসদ সংকল্প নিয়েছিল অন্য রাজ্যের জন্য নির্ধারিত সময়-সীমার মধ্যেই ফল প্রকাশ করবে। ৮ই জুন ২০০৫ সংসদ ২০০৫ সালের উচ্চ মাধ্যমিক পরীক্ষার ফল প্রকাশ করেছে। পশ্চিমবঙ্গের দায়িত্বশীল শিক্ষকসমাজ আমাদের দিকে পূর্ণ সহযোগিতা প্রসারিত করে এই দুরূহ কাজকে সম্ভব করে তুলতে অকুণ্ঠ সাহায্য করেছেন। পশ্চিমবঙ্গ বিদ্যালয় শিক্ষাদপ্তর থেকে আমরা উল্লেখযোগ্য সাহায্য পেয়েছি। বিদ্যালয় শিক্ষকদের পরীক্ষা সংক্রান্ত কাজের জন্য ডিউটি লিভ অনুমোদন করে যে আদেশনামা বেরিয়েছে তা অত্যন্ত জরুরি ছিল। আমরা প্রশাসন থেকে সাধারণ মানুষ সব স্তর থেকেই সহায়তা পেয়েছি এবং ভবিষ্যতেও এই সাহায্য পাব এই দৃঢ় প্রত্যাশা রাখি।

শান্তিপূর্ণভাবে পরীক্ষাগ্রহণ, পরীক্ষার দ্রুত ফল প্রকাশ, নতুন পাঠক্রম প্রবর্তন, নতুন পাঠক্রমের প্রতিটি বই নিরীক্ষার যথাযথ ব্যবস্থা, পরীক্ষা বিভাজনের প্রেক্ষিতে পাঠক্রম বিভাজন — সব মিলিয়ে উচ্চ মাধ্যমিক শিক্ষা সংসদের কর্ম চাঞ্চল্যে সর্বদাই জোয়ারের কাল চলছে। সংসদের কর্মীরা হাসিমুখে তাঁদের দায়িত্ব পালন করে চলেছেন। পশ্চিমবঙ্গের ছাত্রসমাজ এই রাজ্যের ভবিষ্যৎ, তাদের সেবায় নিজেকে নিয়োজিত করাতেই সংসদের গৌরব।

পাঠক্রমের প্রথম পর্বের বই প্রকাশনার কাজ যথাসময়ে সম্পন্ন হয়েছে। দ্বিতীয় পর্বের পুস্তকসমূহের প্রকাশনা সেপ্টেম্বরের মধ্যে সম্ভব হবে বলে সংসদ আশা করে। পাঠ্যপুস্তকসমূহের লেখক, নিরীক্ষক ও প্রকাশকদের আন্তরিক ধন্যবাদ জানাই।

এই বিশেষ সংখ্যাটি আমাদের খুব দ্রুত প্রকাশ করতে হয়েছে। সংসদ যথেষ্ট যত্নবান হওয়া সত্ত্বেও পত্রিকাটিতে অনিচ্ছাকৃত কিছু মুদ্রণ প্রমাদ থেকে যেতে পারে। তারজন্য আমরা মার্জনা প্রার্থী। এই ধরনের ত্রুটি কারো নজরে এলে অনুগ্রহ করে আমাদের জানাবেন, এই অনুরোধ রইল।

নমস্কার

গোপা দত্ত

গোপা দত্ত
সভাপতি

পশ্চিমবঙ্গ উচ্চ মাধ্যমিক শিক্ষা সংসদ — কিছু কথা

কান্তি বিশ্বাস
শিক্ষামন্ত্রী
বিদ্যালয় শিক্ষা দপ্তর, পশ্চিমবঙ্গ সরকার

পশ্চিমবঙ্গ উচ্চ মাধ্যমিক শিক্ষা সংসদ তার জীবনের ঘটনাবহুল তিন দশককে অতিক্রম করে এক গুরুত্বপূর্ণ মুহূর্তে এসে দাঁড়িয়েছে। বিজ্ঞান-প্রকৌশলে অকল্পনীয় অগ্রগতি তাবৎ বিশ্বে এক অভিনব পরিমণ্ডল সৃষ্টি করেছে। এক নূতন সামাজিক ও অর্থনৈতিক আলোড়ন সৃষ্টি হয়েছে। বিশোধিত একবিংশ শতাব্দী সমগ্র মানব সমাজের সম্মুখে অনেকগুলি গুরুতর প্রশ্ন উপস্থিত করেছে। বিশ্বসভ্যতাকে কল্যাণময়ী মূর্তিতে উদ্ভাসিত করতে হলে ওই সকল প্রশ্নরাজির ইতিবাচক উত্তরের অন্বেষণ করতে হবে। সেই মহতী কাজে শিক্ষা এক অপরিসীম তাৎপর্যপূর্ণ ভূমিকা পালন করতে পারে। রাষ্ট্র সংঘ নিয়ন্ত্রিত শিক্ষা-বিজ্ঞান-সাংস্কৃতিক সংস্থা স্বীয় কর্তব্য পালন করার জন্য বিভিন্ন প্রকার উদ্যোগ ও কর্মসূচী গ্রহণ করে চলেছে। প্রত্যেকটি দেশ নিজ দায়িত্বের গভীরতা অনুভব করে আপন কর্মসূচী প্রণয়ন করছে।

আমাদের দেশ ভারতবর্ষ অনেক গৌরবমণ্ডিত অতীতের অলঙ্কারে সজ্জিত। বিশ্বের প্রথম ব্যাকরণ — পাণিনির ব্যাকরণ — রচিত হয়েছিল আমাদের দেশে। আর্য ভট্ট, ব্রহ্ম গুপ্ত সহ অনেক বিজ্ঞানী এই দেশের মাটিতে জন্ম গ্রহণ করে বিশ্বের জ্ঞান ভাণ্ডারকে সমৃদ্ধ করেছেন। শূন্যের আবিষ্কার করে গণিত চর্চাকে সমুন্নত করতে ভারতবর্ষ যোগ্য ভূমিকা পালন করেছে। ইউরোপে যখন কোনো বিশ্ববিদ্যালয় স্থাপিত হয় নি, তখন তক্ষশিলা, বিক্রমশীলা, নালন্দা বিশ্ববিদ্যালয় বিশ্বের জ্ঞান-পিপাসু মানুষদের আকর্ষণ করতো। আরো অনেক প্রাসঙ্গিক উদাহরণ দেওয়া যেতে পারে।

শিক্ষা জগতে আজ ভারতের অবস্থা বড় করুণ, বড় দুঃখের। স্বাধীনতার ৫৮ বৎসর পরে, বিশ্বের আঙ্গিকে আমরা বড়ই পশ্চাৎপদ। শিক্ষার উন্নয়ন সূচকে বিশ্বের ১২৭টি দেশের মধ্যে ভারতের স্থান ১০৫ নম্বরে। বিশ্বের সংশ্লিষ্ট বয়সের কিশোরদের মাধ্যমিক বিদ্যালয়ে যায় গড়ে ৬৩·৭ শতাংশ এবং ভারতে এই হার ৫০·৩ শতাংশ।

এই ব্যর্থতার গ্লানি দূর করা শুধু জাতীয় গৌরবের স্বার্থে নয়, দেশের অগ্রগতির প্রয়োজনেও অপরিহার্য। প্রাথমিক থেকে উচ্চ মাধ্যমিক, মহাবিদ্যালয় থেকে বিশ্ববিদ্যালয়, প্রযুক্তি, তথ্য প্রযুক্তি সর্ব ক্ষেত্রে আমাদের অগ্রগতিকে ত্বরান্বিত করতে হবে। এ-ক্ষেত্রে উচ্চ মাধ্যমিক শিক্ষার একটি বিশেষ ভূমিকা আছে। বস্তুতঃ এই স্তরের শিক্ষাই পরবর্তী বিভিন্ন ধারার শিক্ষার প্রবেশ দ্বার। উচ্চতর শিক্ষার বিভিন্ন শাখায় সাফল্য বহুলাংশে নির্ভর করে উচ্চ মাধ্যমিক শিক্ষার ব্যাপ্তি এবং মানের উপর।

আমাদের রাজ্যে একাদশ-দ্বাদশ শ্রেণী সমন্বিত উচ্চ মাধ্যমিক শিক্ষা প্রবর্তিত হয় ১৯৭৬ সালে। ১৯৭৮ সালে প্রথমে উচ্চ মাধ্যমিক পরীক্ষা গৃহীত হয়। পরীক্ষার্থীর সংখ্যা ছিল ৫৯ হাজার। এই সংখ্যা ধারাবাহিক ভাবে দ্রুততার সাথে বৃদ্ধি পেয়ে ২০০৫ সালে হয়েছে ৪,০৩,৯৬৮। এই বৃদ্ধির হার সমগ্র দেশের মধ্যে তুলনাহীন।

সাধারণ বিভাগে ৫৪টি বিষয় এবং বৃত্তিমূলক শাখায় ৩৬টি বিষয় অধ্যয়নের সুযোগ আছে পশ্চিমবঙ্গ উচ্চ মাধ্যমিক শিক্ষা সংসদের ব্যবস্থাপনায়। এতগুলি বিষয়ের পঠন-পাঠনের ব্যবস্থা আর কোনো রাজ্যে নেই।

বর্তমান পরিবর্তিত অবস্থায় বিশেষ করে দেশের অবশিষ্ট রাজ্যগুলির সাথে সম্পর্ক বজায় রাখার জন্য একাদশ ও দ্বাদশ শ্রেণীর পরীক্ষা ভিন্ন মাত্রায় পৃথক ভাবে গ্রহণ করার সিদ্ধান্ত পশ্চিমবঙ্গ উচ্চ মাধ্যমিক শিক্ষা সংসদকে গ্রহণ করতে হয়েছে।

অস্বীকার করার উপায় নেই এই সিদ্ধান্ত আরো ২/১ মাস পূর্বে করলে শিক্ষক শিক্ষার্থীদের সুবিধা হত। যে অসুবিধাটুকু হবে রাজ্যের কর্তব্যপরায়ণ শিক্ষক সমাজের নিষ্ঠা ও দক্ষতা এবং শিক্ষার্থী-অভিভাবকবৃন্দের আন্তরিকতা ও সহযোগিতাকে সম্বল করে তা কাটিয়ে ওঠা যাবে — এই দৃঢ় বিশ্বাস আমার আছে।

প্রধান শিক্ষক মহাশয়/শিক্ষিকা মহাশয়া

____

____

বিষয় ঃ ২০০৫-২০০৬ শিক্ষাবর্ষে উচ্চ মাধ্যমিক স্তরে বিশ্বভারতী কর্তৃক প্রকাশিত ভাষা বিষয়ক আসল বইগুলি কেনা ও নকল বই সম্পর্কে সজাগ/সতর্ক হওয়া সম্পর্কে।

সবিনয় নিবেদন,

আপনারা অবহিত আছেন যে, এ বছর ২০০৫-২০০৬ শিক্ষাবর্ষ থেকে উচ্চ মাধ্যমিক শিক্ষা সংসদের পক্ষে বিশ্বভারতী কর্তৃক প্রকাশিত একাদশ ও দ্বাদশ শ্রেণির ভাষাবিষয়ক বইগুলি (যেমন বাংলা, ইংরেজি, সংস্কৃত, হিন্দি ইত্যাদি নূতন পাঠ্যক্রম অনুসারে) মে মাসের ২০০৫-এর শেষ দিকে প্রকাশিত হবে। আসল বই কেনার সময়ে প্রত্যেক বইয়ের পাতায় বিশ্বভারতীর জল-ছাপ (Water Marks) দেখে কেনার জন্য ছাত্র/ছাত্রীদের অবহিত করার নির্দেশ দিলে বাধিত হব।

সমগ্র ছাত্রসমাজ ও আপনাদের মতো নির্ভরযোগ্য শিক্ষা প্রতিষ্ঠানের পক্ষে আসল বই সংগ্রহ করতে হলে বিশ্বভারতীর বিপণি এবং নিম্নলিখিত এজেন্টদের কাছ থেকে সরাসরি বই সংগ্রহ করা সম্পূর্ণ নিরাপদ হ'বে। আপনারা স্থানীয় পুস্তকবিক্রেতাদের অনুরোধ করতে পারেন তারা যেন সংশ্লিষ্ট এজেন্টদের কাছ থেকে বা কলকাতা থেকে বই সংগ্রহ করেন।

১। বিশ্বভারতী বিপণি
২ বঙ্কিম চ্যাটার্জী স্ট্রিট, কলকাতা - ৭৩

২। বিশ্বভারতী বিপণি
২১০, বিধান সরণি, কলকাতা - ৬

৩। বিশ্বভারতী বিপণি
উত্তরায়ণ, শান্তিনিকেতন - ৭৩১২৩৫

৪। উষা পাবলিশিং হাউস
১৩ /১ বঙ্কিম চ্যাটার্জী স্ট্রিট, কলকাতা - ৭৩

৫। মণ্ডল বুক হাউস
৭৮/১ মহাত্মা গান্ধি রোড, কলকাতা - ৭৩

৬। মহাজাতি প্রকাশন
১৩ বঙ্কিম চ্যাটার্জী স্ট্রিট, কলকাতা - ৭৩

৭। বিষ্ণুপ্রিয়া প্রকাশনী
২ বঙ্কিম চ্যাটার্জী স্ট্রিট, কলকাতা - ৭৩

৮। সরোজ লাইব্রেরী
১বি কলেজ রো, কলকাতা - ৯

৯। সরোজ পাবলিকেশন
১বি কলেজ রো, কলকাতা - ৯

১০। সুবর্ণরেখা
শান্তিনিকেতন, বীরভূম

১১। বীণাপাণি বুক হাউস
মালদা কলেজ গেট, রবীন্দ্র এভিনিউ, মালদা -৭৩২১০১

১২। স্টুডেন্টস ফ্রেন্ডস স্টোর
পোঃ ময়নাগুড়ি। নিউ মার্কেট, জেলা ঃ জলপাইগুড়ি ৭৩৫২২৪

১৩। বুকস
শিশির ভাদুড়ি সরণি। ক্ষুদিরাম পল্লি। বিবেকানন্দ সুপার মার্কেটের পিছনে, পোঃ শিলিগুড়ি - ৭৩৪৪০১

১৪। বুক কর্নার
কাদাই। বহরমপুর। মুর্শিদাবাদ - ৭৪২১০১

১৫। মল্লিক লাইব্রেরি
৯, বড়োবাজার। মেদিনীপুর ৭২১১০১

১৬। পুরুলিয়া বুক ডিপো
পুরুলিয়া হাটতলা। জেলা ঃ পুরুলিয়া - ৭২৩০০১

১৭। ভ্রাতৃ সংঘ
সুভাষ রোড, জেলা ঃ বাঁকুড়া - ৭২২১০১

১৮। শিশুসাথী
সি. আর দাস রোড। পোঃ সিউড়ি। জেলা ঃ বীরভূম - ৭৩১১০১

১৯। মহামায়া বুক এজেন্সি
কেশব রোড (মিনি বাস স্ট্যান্ড) কুচবিহার ৭৩৬১০১

কোনোরকম বিভ্রান্তির সৃষ্টি হ'লে সরাসরি কলকাতায় সংসদ-এর পক্ষে ডঃ দেবাশিস সরকার, সচিব, দূরভাষ ঃ ০৩৩-২৩৫৯-৬৫২৫ বা বিশ্বভারতী-এর পক্ষে শ্রী ভবেশ হাজরা, উপাধ্যক্ষ (বিক্রয়) দূরভাষ ঃ ০৩৩-২২৪৭-৯৮৬৮/৬৯-এর সঙ্গে বা জেলা পুলিশের Enforcement দপ্তরের সঙ্গে যোগাযোগ করতে পারেন।

কলকাতা, ২৭ এপ্রিল, ২০০৫

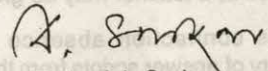
ডঃ দেবাশিস সরকার, সচিব
পশ্চিমবঙ্গ উচ্চ মাধ্যমিক শিক্ষা সংসদ
বিদ্যাসাগর ভবন, সল্টলেক, কল কাতা।

শ্রী সুনীল কুমার সরকার
কর্মসচিব
বিশ্বভারতী

West Bengal Council of Higher Secondary Education

Vidyasagar Bhavan, 9/2 Block–DJ, Sector-II
Salt Lake City, Kolkata–700091

No. Est/187/2005 Date : 04.05.2005

From : Dr. Debasish Sarkar,
Secretary.
West Bengal Council of Higher Secondary Education

To All Heads of the Institution

Subject: 'On duty' of teachers Performing Examination Duties

Sir/Madam,

Please find a copy of Govt. Order regarding above mentioned subject with this letter.

Thanking you,
Yours sincerely,

(Debasish Sarkar)

Government of West Bengal
Office of the Commissioner of School Education, West Bengal &
Ex-officio Principal Secretary to the Govt. of West Bengal &
Director of School Education, West Bengal

Bikash Bhavan (7th Floor), Salt Lake City, Kolkata-700 091

Order No. 483/Se/Apt Dated: Kolkata, the 3rd May, 2005

The undersigned is directed to state that the contents of the circular, issued by the West Bengal Board of Secondary Education, Vide No.3/103 dated 12th April, 2002, in respect of 'On duty' of a teacher on all aspects centering round the publication of results for M.P. (SE)/M.P. (SE) (Ext.) in the various party is also applicable in case of the teachers to be engaged for similar works of Higher Secondary Examination.

Besides, the absence of the teachers for attending camp for evaluation of answer scripts of Higher Secondaiy Examination, which is scheduled to be held on and from 2nd May, *2005,* be treated as 'On duty' on production of certificate from the competent authority.

Sd/-
Commissioner of School Education,West Bengal

No. 483/1(22)Se/Apt.
Copy forwarded to:

1) District Inspector of Schools (S.E.) of all the districts with the request to communicate the orders to the concerned institutions immediately and ensure this directorate.
2) The President, West Bengal Council of Higher Secondary Education for information. This has in reference to her D.O. No. FR/2005/14 dated 26th April, 2005, Vidyasagar Bhavan.

Sd/- illegible
Commissioner of School Education,West Bengal

West Bengal Board of Secondary Education

77/2 Park Street, Kolkata -16

Circular No. 3/103 Date 12.04.2002

From : The Secretary
West Bengal Board of Secondary Education

To: The Heads of all Secondary Schools under this Board

Sub : 'On Duty' of a teacher on all aspects centering round the publication of results for M.P (SE)/M.P.(SE) (Ext)

The undersigned is directed to state that for the evaluation/scrutiny of answer scripts for the M.P. (SE)/(Ext.) fall within the bounden duties of a teacher. Hence, 'On Duty' may be granted to a teacher for the purpose under the following circumstances as noted in Boards Manual under Circular No. 40/5 8 in Clause No.2 "absence arising out of service for attending the Head Examiner's Meeting of the Board or for having an interview with the Board, if called by the Board should be treated as on duty".

In terms of Clause 2, a teacher may be granted 'On duty' under the following cases :–

A. i) In this connection absence arising out of service of a teacher for the day for taking delivery of answer scripts from the residence of H.E. or from the venue organised by the Board from Board's Office may be treated as 'On duty'. (On production of Certificate from the Head Examiner or from the Board for the day only).

ii) **Absence arising out of service**
For submission of examined answer scripts along with marks to the residence of Head Examiners for two/three days separately may be treated as 'On duty'. On production of certificate mentioning time, date and purpose for the day/days from the Head Examiner or from the Board.

In Clause No. 2

B. i) Absence arising out of service for the day of an Headmaster / Asstt. teacher as an Head Examiner for attending Head Examiner's meeting at Board's Office may be treated as 'On duty' for the day on production of meeting notice or a certificate from the Board.

ii) In case of Head Examiner
Absence arising out of service of an Headmaster/Asstt. Teacher for submission of marks to the Board by three/four instalments as an Head Examiner, the particular dates may be treated as 'On duty' (not more than four days), provided the purpose may be certified by the Board or on production of receipts for the same.

In Clause No. 2

C. **Special circumstances**
Absence arising out of service of a teacher for attending the spot evaluation camp as an Examiner/ Head Examiner/Scrutineer which is organised by the Board for the M.P. (SE)/ (Ext.). 2002 and onwards for the day/days on production of certificate from the Board may be treated as on duty.

Sd/- illegible
Secretary

Copy to : 1) The Director of School Edn. (W.B.)
2) The D.I. of School (SE) for all Dist.

West Bengal Council of Higher Secondary Education

Vidyasagar Bhavan, 9/2 Block–DJ, Sector-II
Salt Lake City, Kolkata–700091

No. DS/(A)SD/692/05 Date : 05.05.2005

From : Dr. Debasish Sarkar
Secretary
West Bengal Council of Higher Secondary Education

To : All Heads of the Higher Secondary Institution
____
____
____

Subject : Publication of Booklist

Sir,

This is to inform you that the revised syllabi in respect of 27 subjects are going to be introduced in all recognized institutions of the West Bengal Council of Higher Secondary Education from 2005 - 2006 academic session.

A list of approved text books bearing the Text Book (TB) number, names of the authors and publishers is being sent herewith for your kind perusal. Now, the heads of the institution are directed to publish their *Book List* on the basis of the recommendation of the *Academic Council* of each institution, before commencement of the session and in selecting books, the institution should exercise with utmost care, as a book once prescribed, shall be allowed to continue at least for 3 years unless there are compelling reasons for a change. The institution will have to select only one text book in each subject.

As the matter is extremely urgent the copy of such printed book list must be sent to the Council before commencement of the session.

Thanking you,

Yours faithfully,

(Debasish Sarkar)
Secretary

Encl. : List of approved text books.

West Bengal Council of Higher Secondary Education

Vidyasagar Bhavan, 9/2 Block–DJ, Sector-II
Salt Lake City, Kolkata–700091

No. DS(A)/SD/1 022/05 Date: 16-06-2005

From : Secretary
W.B. Council of H.S. Education

To : The Heads of all Higher Secondary Institutions

Sub : Amendment in respect of regulation 6 and 7 of the W.B. Council of H.S. Education (Admission and Allied Matters) Regulation. 1987.

Dear Sir / Madam,

I am directed to inform you that the Government has made a partial amendment in respect of regulation 6 and 7 of the West Bengal Council of Higher Secondary Education (Admission and Allied Matters) Regulation 1987 under Notification No. 64— SE(HS) / 8C-07/04 dated 15th June, 2005. A copy of the said Notification is given below for taking necessary action at your end. Kindly note that this amendment will be effective from the current academic session i.e. 2005 — 2006.

Yours faithfully

(Debasish Sarkar)
Secretary

"Notification"

No. 64-SE(HS)/8C-07/04, the 15th June, 2005 — In exercise of the power conferred by clauses (d), (h) and (k) of sub-section (2), read with sub-section (3), of section 21 of the West Bengal Council of Higher Secondary Education Act, 1975 (West Bengal Act VIII of 1975) (hereinafter referred to as the said Act.), the West Bengal Council of Higher Secondary Education, with the previous approval of the State Government, hereby makes, with immediate effect, the following amendments in the West Bengal Council of Higher Secondary Education (Admission and Allied Matters) Regulations, 1987, as subsequently amended (hereinafter referred to as the said regulations)

AMENDMENTS

In the said regulations —

(1) in regulation 6, for clause (b), substitute the following clause :

"(b) The Council prescribes the following nine groups of elective subjects in General Stream Courses, as specified in the Table below :

Table

Group (1)	Subjects (2)
i.	Physics, Nutrition, Education, Business Organisation and Management
ii.	Biological Sciences, Home Management and Home Nursing, Business Economics including Business Mathematics
iii.	Chemistry, History, Accountancy
iv.	Political Science, Sociology, Geology
v.	Anthropology, Economics, Fine Arts & Crafts, Music
vi.	Psychology, Economic Geography, Geography
vii.	Statistics, Classical Languages, Modern Foreign Languages, Agronomy
viii.	Mathematics, Philosophy
ix.	Computer Science, Modern Computer Application

Note -(1) A student shall have to offer three compulsory Elective subjects and for this purpose make choice of one subject only from one group and one Optional Elective subject from any other groups.

(2) Under the subject Classical Languages, there are four languages i.e. (i) Sanskrit (ii) Pali (iii) Persian (iv) Arabic.

(3) Under the subject Modern Foreign Languages, there are four languages i.e. (i) French (ii) German (iii) Russian (iv) Chinese

(2) after regulation 7, insert the following regulation :

"7A. Course on Environmental Education — Notwithstanding anything contained in regulation 6 or regulation 7, a student shall have to study Environmental Education as compulsory subject."

Gopa Datta

President

West Bengal Council of Higher Secondary Education

West Bengal Council of Higher Secondary Education

Vidyasagar Bhavan, 9/2 Block–DJ, Sector-II
Salt Lake City, Kolkata–700091

No. L/Secy/854/05 Date : 18.08.2005

From : Dr. Debasish Sarkar
Secretary
West Bengal Council of Higher Secondary Education

To : All Heads of the Institution

Sir/Madam,

In order to reduce the gap between the fees collected and related expansionary expenditure the Council in its meeting on 17/8/05 resolved the following structure of the fees which will be effected from the academic session 2005-2006.

This is for your information and adherence.

	Nature of Fees	Rates	Effective from Financial Year
i.	Registration fees		
	REGULAR :		
	Non-Migrating	Rs. 75/-	2005-06
	Migrating	Rs. 85/-	2005-06
	External :		
	Non-Migrating	Rs. 70/-	2005-06
	Migrating	Rs. 80/-	2005-06
ii)	Post Publication Scrutiny (Per paper)	Rs. 60/-	2006-07
iii)	All types of forms (excepting first recognition application form)	Rs. 15/-	2005-06
iv)	Transcription of Mark-sheet	Rs. 250/-	2005-06
v)	Change of Centre	Rs. 125/-	2005-06
vi)	All kinds of Duplicates		
	Ordinary	Rs. 80/-	2005-06
	Urgent	Rs. 90/-	2005-06
vii)	Late fees for examination	Rs. 40/-	2005-06
viii)	Price of Recognition form	Rs. 100/-	2005-06
ix)	Condonation of short percentage	Rs. 150/-	2005-06

D. Sarkar

(Debasish Sarkar)
Secretary

West Bengal Council of Higher Secondary Education

Vidyasagar Bhavan, 9/2 Block–DJ, Sector-II
Salt Lake City, Kolkata–700091

No. L/Secy/86/05 Date : 19.08.2005

From : Secretary
W.B. Council of H.S. Education

To : The Heads of all Higher Secondary Institutions

Sub : Establishment of the West Bengal State Council of Vocational Education and Training

Sir,

With reference to the above subject I am directed to inform you that in order to develop the standard of vocational education and training in West Bengal, State Government has already established a separate Council named as West Bengal State Council of Vocational Education and Training under the West Bengal State Council of Vocational Education and Training Act, 2005 (West Bengal Act VII of 2005).

In view of the above and interms of G. O. No. 970/1(3)–SE(S) 01.08.05 from the academic session 2005-2006 onward all the Higher Secondary Institutions having vocational stream course will be under the control of the West Bengal State Council of Vocational Education for the vocational stream course only and all the students intending to study vocational stream course will follow the presicribed syllabus of studies prescribed by the aforesaid council.

Yours faithfully

(Debasish Sarkar)
Secretary

West Bengal Council of Higher Secondary Education

Vidyasagar Bhavan, 9/2 Block–DJ, Sector-II
Salt Lake City, Kolkata–700091

No. L/Secy/86A/05 Date : 19.08.2005

From : The Secretary
West Bengal Council of High Secondary Education

To : The Heads of all Higher Secondary Institution.

Sir / Madam.

I am directed to mention below the schedule for distribution and submission of various types of forms of the council :

Enrolment Forms for Continuing/Special Candidates (2006 H.S. Examination)
By the Institution to the Coucil :

Without Late fine — 06. 09. 2005 (Tuesday)
With Late fine — 13. 09. 2005 (Tuesday)

Enrolment Forms for Regular Candidates (2006 H.S. Examination)
By the Institution to the Coucil :

Without Late fine — 03. 01. 2006 (Tuesday)
With Late fine — 10. 01. 2006 (Tuesday)

Revised last Date for Submission of Filled in Registration Forms By the Institution to the council (Season 2005-2006)
By the Institution to the Coucil :

Without Late fine — 04. 10. 2005 (Tuesday)
With Late fine — 20. 10. 2005 (Thursday)

Copies of Registration form other than the first copy will not be accepted.

Dates of Distribution of Blank Enrolment and registration Forms : (From Regional Office)
By the Institution to the Coucil :

A) C. C/SPL (2006) — From 02.08.2005 (Tuesday)
B) Registration Form 2005-2006 — From 06.09.2005 (Tuesday)
C) Regular 2006 — From 08.11.2005 (Tuesday)

All are requested to adhere to the above sehedule.

Last date for submission of forms will not be extended under any circumstances.

Thanking you
Yours faithfully,

D. Sarkar.

(Debasish Sarkar)
Secretary
W. B. Council of Higher Secondary Education

West Bengal Council of Higher Secondary Education

Vidyasagar Bhavan, 9/2 Block–DJ, Sector-II
Salt Lake City, Kolkata–700091

No. L/Secy/87/05 Date : 19.08.2005

From : The Secretary
West Bengal Council of High Secondary Education

To : The Heads of all Higher Secondary Institutions.

Sub : Changes in the Higher Secondary Examination from the academic session 2005- 2006 on wards

Sir/Madam,

I am directed to invite your kind attention to the following changes in the Higher Secondary Examination from the **Academic Session 2005-2006**.

1. The present Higher Secondary Examination will be separated into two examination — one at the end of class XI and another at the end of class XII.
2. Examination at the end of class XI will be conducted by the respective Institution on the basis of the syllabus to be covered in class XI as specified by the council. Examination at the end of class XII will be conducted by the council only on the basis of the syllabus covered in class XII as specified by the council and the result will be published by the council centrally.
3. Question paper for class XI examination will be prepared by the council for a temporary period, but the assessment of answer scripts would be done by the respective Institution.
4. Schedule for class XI examination and the contents of syllabus to be covered in class XI and XII will be intimated by the council in due course.
5. The Higher Secondary examination Mark Sheet of class XII will show only the marks obtained in class XII examination conducted by the council.
6. Necessary changes in Examination Regulation of the council will be done in due course.

All are requested to note that if any question in relation to the above changes arises the same may be referred to the council for Interpretation.

D. Sarkar.

(Debasish Sarkar)
Secretary
W. B. Council of Higher Secondary Education

West Bengal Council of Higher Secondary Education

Vidyasagar Bhavan, 9/2 Block–DJ, Sector-II
Salt Lake City, Kolkata–700091

Programme of Higher Secondary Examination — 2006
(General And External)

Date	Morning (From 10 a.m. to 1 p.m.)	Afternoon (From 2 p.m. to 5 p.m.)
17/03/2006 Friday	Bengali(A), Hindi(A), Nepali(A), Bengali(B), Hindi(B), Nepali(B), Santali, Urdu, Tamil, Telugu, Malyalam, Oriya, Marathi, Gujrathi, Punjabi, Assamese, Modern Tibetan, Alternative English (Paper I)	Bengali(A), Hindi(A), Nepali(A), Bengali(B), Hindi(B), Nepali(B), Santali, Urdu, Tamil, Telugu, Malyalam, Oriya, Marathi, Gujrathi, Punjabi, Assamese, Modern Tibetan, Alternative English (Paper II)
20/03/2006 Monday	English (A) Paper I English (B) Paper I	English (A) Paper II English (B) Paper II
22/03/2006 Wednesday	Chemistry Accountancy (Paper I)	Chemistry Accountancy (Paper II)
24/03/2006 Friday	History (Paper I)	History (Paper II)
27/03/2006 Monday	Mathematics(Paper I)	Mathematics(Paper II)
29/03/2006 Wednesday	Physics, Nutrition, Education, Business Organisation (Paper I)	Physics, Nutrition, Education, Business Organisation (Paper II)
31/03/2006 Friday	Biological Sciences, Botany, Zoology, Physiology, Home Management & Home Nursing, Business Economics including Business Mathematics (Paper I)	Biological Sciences, Botany, Zoology, Physiology, Home Management & Home Nursing, Business Economics including Business Mathematics (Paper II)
03/04/2006 Monday	Statistics, // Classical Languages, // Modern Foreign Languages, Agronomy (Paper I)	Statistics, // Classical Languages, // Modern Foreign Languages, Agronomy (Paper II)
05/04/2006 Wednesday	Computer Science, Modern Computer Application (Paper I) * Music (1st half only)	Computer Science, Modern Computer Application (Paper II)

Date	Morning (From 10 a.m. to 1 p.m.)	Afternoon (From 2 p.m. to 5 p.m.)
08/04/2006 Saturday	Psychology, Geography, Economic Geography (Paper I)	Psychology, Geography, Economic Geography (Paper II)
10/04/2006 Monday	Political Science, Geology, Public Administration, Sociology (Paper I)	Political Science, Geology, Public Administration, Sociology (Paper II)
12/04/2006 Wednesday	Economics, Anthropology (Paper I) * Fine Arts & Crafts (1st half only)	Economics, Anthropology (Paper II)
13/04/2006 Thursday	Philosophy (Paper I)	Philosophy (Paper II)

* The Examination of these subjects will be of three hours duration
// Classical Languages : Sanskrit, Pali, Persian, Arabic
/1 Modern Foreign Languages : French, German, Russian, Chinese.

Dinendra narayan Munshi

(Dinendra Narayan Munshi)
Deputy Secretary (Examination)

Vidyasagar Bhavan

West Bengal Council of Higher Secondary Education

Vidyasagar Bhavan, 9/2, Block - DJ, Sector - II, Salt Lake, Kolkata - 700091.

Programme of Higher Secondary Examination — 2006
(Vocational)

Date	Morning (From 10 a.m to 1 p.m)	Afternoon (From 2 p.m to 5 p.m)
17/03/2006 Friday	Bengali, Hindi, Urdu, Nepali	
20/03/2006 Monday	English	
24/03/2006 Friday	i) Entrepreneurship & Basic Theory (Technical Group) ii) Entrepreneurship & Basic Theory (Agriculture Group) iii) Entrepreneurship & Basic Theory (Trade & Commerce Group)	
27/03/2006 Monday	Chemistry	Business Economics including Business Mathematics
29/03/2006 Wednesday	Mathematics	Economic Geography
31/03/2006 Friday	Physics	Stenography (Trade & Commerce)
05/04/2006 Wednesday	Biological Sciences	Banking (Trade & Commerce)
08/04/2006 Saturday	* Technical Drawing (For Technical Course only)	Accountancy
10/04/2006 Monday	Theory of Different Areas of **Agriculture Group** i) Principle of Crop Production ii) Horticulture and Fruit & Vegetable Preservation iii) Poultry Farming iv) Pisciculture **Technical Group** i) Mechanical Servicing & Maintenance ii) Farm Equipments & Maintenance iii) Automobile Servicing & Maintenance iv) Fabrication Practice v) Electrical Servicing & Maintenance vi) Civil Engineering & Maintenance vii) Water Supply & Sanitary Service viii) Radio & Electronic Servicing Maintenance **Trade & Commerce Group** Office Procedure & Routine	
13/04/2006 Thursday	Accountancy (Trade & Commerce)	Business Organisation

* The examination of this subject will be of two hours duration. The Council may, if necessary, adjust the above dates with due intimation to all concerned.

All Practical Examinations should be completed within 21st April, 2006, the scripts, marks-foils and attendance cum signature roll of Practical examinations must be submitted to the office of the HS Council by 24.04.2006 (Monday) positively.

Vidyasagar Bhavan

Dinendra Narayan Munshi

(Dinendra Narayan Munshi)
Deputy Secretary (Examination)

বাংলা 'ক' পাঠক্রম

একাদশ শ্রেণি

কবিতা	—	২০
গদ্য	—	২০
নাটক	—	১০
ছোটোগল্প	—	১০
সাহিত্যের ইতিহাস	—	১৫
বাক্য পরিবর্তন/উক্তি পরিবর্তন	—	৫
প্রবাদ-প্রবচন ও বাগ্ধারা	—	৫
অনুবাদ	—	৫
গল্প রচনা/পত্র রচনা/সংলাপ রচনা /প্রতিবেদন রচনা	—	১০
মোট নম্বর		১০০

কবিতা (২০ন/১৩পি)

পদ্মাবতীর বিবাহমঙ্গল : সৈয়দ আলাওল
আত্মবিলাপ : মধুসূদন দত্ত
নবান্ন : যতীন্দ্রনাথ সেনগুপ্ত
বর্ণমালা, আমার দুঃখিনী বর্ণমালা : শামসুর রাহমান

গদ্য (২০ন/১২পি)

ইস্পাতের মেয়ে : বঙ্কিমচন্দ্র চট্টোপাধ্যায়
তোতাকাহিনী : রবীন্দ্রনাথ ঠাকুর
শূদ্র জাগরণ : স্বামী বিবেকানন্দ

নাটক (১০ন/১৩পি)

ঝাঁসীর রানির শেষ যুদ্ধ : তৃপ্তি মিত্র
পাপ-পুণ্য : রবীন্দ্রনাথ ঠাকুর

ছোটোগল্প (১০ন/৯পি)

শ্রীপতি সামন্ত : বনফুল
চতুর্থ পানিপথের যুদ্ধ : সুবোধ ঘোষ

সাহিত্যের ইতিহাস (১ম - ১৭তম অধ্যায়) (১৫ন/৩০পি)

প্রস্তাবনা

১। বাংলা ভাষার বিকাশের আগে বাঙালি কবিদের সাহিত্যচর্চার সংক্ষিপ্ত বিবরণ, বাংলা সাহিত্যের যুগবিভাগ ঃ আদি, মধ্য ও আধুনিক।

আদি যুগ

২। চর্যাপদ ঃ ঐতিহাসিক গুরুত্ব, সামগ্রিক সাহিত্যমূল্য, কয়েকজন প্রধান কবির নাম।

মধ্য যুগ

৩। তুর্কি আগমন ও তার সামাজিক-সাংস্কৃতিক পরিণাম।

৪। শ্রীকৃষ্ণকীর্তন এবং বৈষ্ণব পদাবলির সংক্ষিপ্ত পরিচয় (আলোচ্য কবি — বিদ্যাপতি, চণ্ডীদাস, জ্ঞানদাস ও গোবিন্দদাস)

৫। অনুবাদ-কাব্য ঃ রামায়ণ, ভাগবত ও মহাভারতের অনুবাদ সম্বন্ধে সংক্ষিপ্ত আলোচনা।

৬। মঙ্গলকাব্য রচনার সামাজিক কারণ ও মঙ্গলকাব্যের সাধারণ বৈশিষ্ট্য।

৭। তিন মঙ্গলকাব্যের সংক্ষিপ্ত কাহিনি ও তিন বিশিষ্ট কবির (মুকুন্দ চক্রবর্তী, কেতকাদাস ক্ষেমানন্দ ও ঘনরাম চক্রবর্তী) সংক্ষিপ্ত পরিচয়।

৮। বাঙালির সমাজ ও সাহিত্যে চৈতন্যদেবের আবির্ভাবের গুরুত্ব।

৯। দুটি প্রধান চৈতন্যজীবনী কাব্যের (বৃন্দাবন দাস ও কৃষ্ণদাস কবিরাজ) সাধারণ পরিচয় ও ঐতিহাসিক গুরুত্ব।

১০। আরাকান রাজসভার কবিদের কাব্যচর্চার গুরুত্ব; দৌলত কাজি ও সৈয়দ আলাওল সম্পর্কে সংক্ষিপ্ত আলোচনা।

১১। অষ্টাদশ শতাব্দীর যুগবৈশিষ্ট্য, যুগের প্রেক্ষিতে ভারতচন্দ্র ও রামপ্রসাদের কাব্যচর্চার সংক্ষিপ্ত পরিচয়।

আধুনিক যুগ (ক) উনবিংশ শতাব্দী

১২। নবজাগরণের সংক্ষিপ্ত ইতিহাস ঃ বাঙালির সমাজ ও সাহিত্যে তার প্রভাব

১৩। গদ্যসাহিত্য ঃ

(ক) প্রধান ধারা - ফোর্ট উইলিয়াম কলেজের লেখকগোষ্ঠী (নামোল্লেখ করে সাধারণ পরিচয় ঈশ্বরচন্দ্র বিদ্যাসাগর, বঙ্কিমচন্দ্র)

(খ) বিকল্প ধারা ঃ হুতোম প্যাঁচার নকশা

১৪। বাংলা সাহিত্যচর্চার আধুনিকীকরণে ছাপাখানা, সংবাদপত্র ও সাময়িক পত্রের ভূমিকা ঃ
সংবাদ প্রভাকর, বঙ্গদর্শন - সংক্ষিপ্ত পরিচয়।

১৫। কাব্য ঃ

(ক) মহাকাব্য ও আখ্যান কাব্য ঃ সাধারণ পরিচয় মধুসূদন সম্বন্ধে বিশেষ আলোচনা

(খ) গীতিকাব্য ঃ (সংক্ষেপে লিরিকের বৈশিষ্ট্য আলোচনা) এই শাখার নানা কবির নামোল্লেখ করে বিহারীলাল ও তাঁর দুজন প্রধান অনুগামীর কাব্যচর্চার সংক্ষিপ্ত পরিচয়।

১৬। নাটক ঃ
মধুসূদন দত্ত, দীনবন্ধু মিত্র, গিরিশচন্দ্র ঘোষ

১৭। কথাসাহিত্য ঃ

(ক) প্রধান ধারা - বঙ্কিমচন্দ্রের বিশেষ আলোচনা

(খ) বিকল্প ধারা - তারকনাথ গঙ্গোপাধ্যায়, ত্রৈলোক্যনাথ মুখোপাধ্যায়

বাক্য পরিবর্তন/উক্তি পরিবর্তন (৫ন/৪পি)

প্রবাদ-প্রবচন ও বাগ্‌ধারা (৫ন/৪পি)

অনুবাদ (৫ন/৫পি)

গল্প রচনা/পত্র রচনা/সংলাপ রচনা/প্রতিবেদন রচনা (১০ন/১০পি)

দ্বাদশ শ্রেণি

কবিতা	—	২০
গদ্য	—	২০
ছোটোগল্প	—	১০
সাহিত্যের ইতিহাস	—	১৫
পরিভাষা	—	৫
প্রবন্ধ রচনা	—	১৫
বাংলা ভাষার সংক্ষিপ্ত ইতিহাস	—	১০
ছন্দ	—	৫
মোট নম্বর		১০০

কবিতা (২০ন/১৭পি)

ওরা কাজ করে ঃ রবীন্দ্রনাথ ঠাকুর
আমার কৈফিয়ত ঃ নজরুল ইসলাম
আঠারো বছর বয়স ঃ সুকান্ত ভট্টাচার্য
রাস্তা কারও একার নয় ঃ বীরেন্দ্র চট্টোপাধ্যায়

গদ্য (২০ন/১৩পি)

মানবতন্ত্র ঃ আবুল ফজল
শিল্পী ঃ মানিক বন্দ্যোপাধ্যায়
শব্দের আশীর্বাদ, শব্দের অভিশাপ ঃ
ডাঃ আবিরলাল মুখোপাধ্যায়

ছোটোগল্প (১০ন/১১পি)

গুপ্তধন ঃ রবীন্দ্রনাথ ঠাকুর
একটি তুলসী গাছের কাহিনী ঃ সৈয়দ ওয়ালীউল্লাহ

সাহিত্যের ইতিহাস (১৮তম - ২৩তম অধ্যায়) (১৫ন/২৫পি)

বিংশ শতাব্দী

১৮। এই শতাব্দীর প্রধান প্রধান ঐতিহাসিক ঘটনা, বাঙালির সমাজজীবনে ও সাহিত্যচর্চায় যেগুলির বিশেষ প্রভাব পড়েছে; সংক্ষিপ্ত বিবরণ (বিভিন্ন রাজনৈতিক আন্দোলন, দুটি বিশ্বযুদ্ধ, মন্বন্তর ও দেশভাগ - আলোচনায় এই চারটি বিষয়কে প্রাধান্য দিতে হবে)।

১৯। কাব্য ঃ সংক্ষিপ্ত বিবরণ ও বিভিন্ন প্রবণতার সাধারণ পরিচয়

(ক) রবীন্দ্রকাব্য ঃ প্রবণতা অনুযায়ী পর্ব বিভাগ করে আলোচনা।

(খ) রবীন্দ্রেতর ঃ নজরুল ইসলাম, যতীন্দ্রনাথ সেনগুপ্ত, মোহিতলাল মজুমদার।

(গ) রবীন্দ্রোত্তর ঃ জীবনানন্দ দাশ, সুধীন্দ্রনাথ দত্ত, সুভাষ মুখোপাধ্যায়।

২০। গদ্যসাহিত্য ঃ সংক্ষিপ্ত পর্যালোচনা - রবীন্দ্রনাথ, প্রমথ চৌধুরী।

২১। কথাসাহিত্য ঃ (উপন্যাস ও ছোটোগল্প) সংক্ষিপ্ত পর্যালোচনা ঃ রবীন্দ্রনাথ, শরৎচন্দ্র, তারাশঙ্কর, মানিক বন্দ্যোপাধ্যায়, বিভূতিভূষণ বন্দ্যোপাধ্যায়, পরশুরাম, প্রেমেন্দ্র মিত্র, বনফুল বিশেষভাবে উল্লেখযোগ্য।

২২। নাটক ঃ সংক্ষিপ্ত বিবরণ।

(ক) প্রচলিত ধারার নাটক ঃ দ্বিজেন্দ্রলাল রায়, ক্ষীরোদপ্রসাদ বিদ্যাবিনোদ।

(খ) রবীন্দ্রনাটক।

(গ) গণনাট্য ও নবনাট্য ঃ বিজন ভট্টাচার্য, উৎপল দত্ত।

২৩। সাময়িক পত্র ঃ সবুজপত্র, কল্লোল, পরিচয় (প্রতি ক্ষেত্রে প্রকাশের কালসীমা, বৈশিষ্ট্য ও লেখকগোষ্ঠীর সংক্ষিপ্ত বিবরণ।)

পরিভাষা (৫ন/৪পি)

প্রবন্ধ রচনা (১৫ন/৫পি)

বাংলা ভাষার সংক্ষিপ্ত ইতিহাস (১০ন/২১পি)

(ক) ভারতের ৪টি ভাষাবংশ ঃ সংক্ষিপ্ত পরিচয়।

(খ) ভারতীয় আর্যভাষার ক্রমবিকাশের তিনটি স্তর — সংক্ষিপ্ত পরিচয়।

(গ) নব্য ভারতীয় আর্যভাষার শাখা-প্রশাখা ঃ সংক্ষিপ্ত পরিচয়।

(ঘ) প্রাচীন ভারতীয় আর্যভাষা থেকে বাংলা ভাষার ক্রমবিকাশের সরল পথরেখা।

(ঙ) বাংলা ভাষার যুগবিভাগ

ভাষা ও উপভাষার সম্পর্ক ; বাংলার মৌখিক ও সাহিত্যিক উপভাষা ; মৌখিক উপভাষার স্থান ও লক্ষণ; সাহিত্যিক গদ্য উপভাষার (চলিত, সাধু) বিবর্তন ও তুলনা।

ছন্দ (৫ন/৪পি)

ন - নম্বর / পি - পিরিয়ড

বাংলা 'খ' পাঠক্রম

একাদশ শ্রেণি

গদ্য	—	২০
কবিতা	—	২০
বঙ্গানুবাদ	—	১০
ব্যাকরণ	—	২০
বোধ-বিচার	—	৩০
মোট নম্বর		১০০

গদ্য (২০ন/২০পি)

আমার দুর্গোৎসব ঃ বঙ্কিমচন্দ্র চট্টোপাধ্যায়
অনধিকার প্রবেশ ঃ রবীন্দ্রনাথ ঠাকুর

কবিতা (২০ন/২০পি)

বঙ্গভূমির প্রতি ঃ মধুসূদন দত্ত
হতভাগ্যের গান ঃ রবীন্দ্রনাথ ঠাকুর
মানুষ ঃ নজরুল ইসলাম

বঙ্গানুবাদ (১০ন/১০পি)

ব্যাকরণ (২০ন/২০পি)

বোধ-বিচার (৩০ন/৩০পি)

ন - নম্বর / পি - পিরিয়ড

দ্বাদশ শ্রেণি

গদ্য	—	২০
কবিতা	—	২০
প্রবাদ ও প্রবচন	—	১০
প্রবন্ধ রচনা	—	২০
ভাব-সম্প্রসারণ/সংক্ষিপ্তসার/পত্র রচনা /প্রতিবেদন রচনা	—	১৫
বঙ্গানুবাদ	—	১০
পরিভাষা	—	৫
মোট নম্বর		১০০

গদ্য (২০ন/২০পি)

লক্ষ্য ও শিক্ষা ঃ রবীন্দ্রনাথ ঠাকুর
দিনু রক্ষিত ঃ বিভূতিভূষণ মুখোপাধ্যায়

কবিতা (২০ন/২০পি)

বাংলার মুখ আমি দেখিয়াছি ঃ জীবনানন্দ দাশ
নবান্ন ঃ যতীন্দ্রনাথ সেনগুপ্ত
বিদ্রোহের গান ঃ সুকান্ত ভট্টাচার্য

প্রবাদ ও প্রবচন (১০ন/১০পি)

প্রবন্ধ রচনা (২০ন/২০পি)

শব্দসীমা অনধিক ৩০০ শব্দ

ভাব-সম্প্রসারণ/সংক্ষিপ্তসার/পত্র রচনা/ প্রতিবেদন রচনা (১৫ন/১৫পি)

যে কোনো একটি

বঙ্গানুবাদ (১০ন/১০পি)

পরিভাষা (৫ন/৫পি)

HINDI — GROUP-A

CLASS XI

Full Marks – 100

गद्य	30
काव्यः	20
हिन्दी साहित्य का इतिहास	20
निबंध लेखन	15
व्याकरण	15

I. गद्य **[30M/ 30P]**

निबंध

1) कविता क्या है? रामचंद्र शुक्ल (Page No. 3 to 6) upto... जो मूर्त और गोचर होंगे)
2) विकलांग श्रद्धा का दौर : हरिशंकर परसाई

कहानी

1) आकाशदीप : जयशंकर प्रसाद
2) सबीना के चालीस चोर : नासिरा शर्मा

एकांकी

1) लक्ष्मी का स्वागत : उपेंद्रनाथ अश्क

II. काव्यः **[20M/38P]**

1) मीरा-पद (संख्या १ से ५)
2) सूरदास- वात्सल्य के ५ पद (१ से ५)
   भ्रमरगीत के ५ पद (१ से ५)
3) बिहारी - दोहा संख्या (१ से १०)
4) निराला - बादल राग, अभी न होगा मेरा अन्त
5) रामधारी सिंह दिनकर - परंपरा, कलम आज उनकी जय बोल
6) धूमिल - मोचीराम

III. हिन्दी साहित्य का इतिहास : **[20M/15P]**

1) खड़ी बोली हिंदी का विकास : संक्षिप्त परिचय
2) हिंदी नवजागरण, भारतेन्दु युगीन साहित्य की प्रवृत्तियाँ, द्विवेदी युग (प्रमुख लेखक - भारतेन्दु हरिशचन्द्र, बालकृष्ण भट्ट, महावीर प्रसाद द्विवेदी, बालमुकुंद गुप्त)
3) छायावाद की विशेषताएँ (प्रमुख कवि - प्रसाद, निराला, पंत और महादेवी वर्मा)
4) प्रगतिशील साहित्य का आंदोलन : प्रमुख विशेषतांए और प्रमुख लेखक (प्रेमचंद, यशपाल, नागार्जुन, रामविलास शर्मा)
5) नए आधुनिक साहित्य : प्रयोगवाद, नई कविता, नई कहानी की प्रमुख विशेषताएँ (प्रमुख लेखक-अज्ञेय और निर्मल वर्मा)
6) उपन्यास और नाटक का उद्‌भव और विकास।

IV. निबंध लेखन : **[15M/7P]**

V. व्याकरण (पाठ्य-पुस्तक पर आधारित) : [15M/10P]

1) वाक्य संशोधन, वाक्य परिवर्तन, वचन, लिंग निर्णय; उपसर्ग, प्रत्यय।

CLASS XII

Full Marks – 100

गद्य	30
काव्यः	20
सहायक पाठ्य पुस्तक (कोई एक)	15
पारिभाषिक शब्दावली :	5
रिपोर्ताज अथवा पत्र लेखन	10
व्याकरण	20

I. गद्य [30M/40P]

निबंध

1) परंपरा : कुछ विचार कुछ प्रश्न - श्यामाचरण दुबे
2) ईश्वर अगर फूल और वृक्ष है - निर्मल वर्मा

कहानी

1) मंत्र : प्रेमचंद
2) रोज : अज्ञेय
3) झुटपुटा : भीष्म साहनी

एकांकी

1) मम्मी ठकुराइन : लक्ष्मीनारायण लाल

II. काव्यः [20M/32P]

1) कबीर - दोहे (दोहा सख्या १ से १०): ३ पद - अरे इन्ह दोउ राह न पाई; तोको पीव मिलेंगे घूंघट के पट, मोको कहां ढुँढे बंदे।
2) तुलसीदास (पाठय पुस्तक में दिए गए सभी पद)
3) प्रसाद : ले चल मुझे भुलावा देकर; अशोक की चिंता
4) नागार्जुन : बादल को घिरते देखा है; शासन की बंदूक
5) मुक्तिबोध : जन जन का चेहरा एक; पूंजीवादी समाज के प्रति
6) रघुवीर सहाय : हँसो हँसो जल्दी हँसो, दे दिया जाता हूँ।

III. सहायक पाठ्य पुस्तक (कोई एक) : [15M/10P]

1) निर्मला (उपन्यास) - प्रेमचंद
2) श्रृंखला की कड़ियाँ (निबंध) - महादेवी वर्मा
3) आषाढ़ का एक दिन (नाटक) - मोहन राकेश

IV. पारिभाषिक शब्दावली : [5M/3P]

V. रिपोर्ताज अथवा पत्र लेखन : [10M/3P]

VI. व्याकरण : [20M/12P]

पाठ्य-पुस्तक पर आधारित-(वचन; कारक चिह्न; संधि; समास; उपसर्ग; प्रत्यय; वाक्य परिवर्तन; वाक्य विश्लेषण; वाक्य संशोधन।

HINDI — GROUP-B

CLASS XI

Full marks – 100

I. गद्य [30M/36P]

निबंध -- नाखून क्यों बढ़ते हैं : हजारीप्रसाद द्विवेदी
रजिया - रामवृक्ष बेनीपुरी
कहानी -- परदा-यशपाल, आर्द्रा - मोहन राकेश
एकांकी -- अधिकार का रक्षक उपेन्द्रनाथ अश्क

I. पद्य : [20M/ 29P]

रहीम - १ से १० दोहे
मीरा - १ से ५ पद
तुलसीदास - १ से ५ दोहे
जयशंकर प्रसाद - हे सागर संगम अरुण नील, अरुणयह मधुमय देश हमारा।
रामधारी सिंह दिनकर : समर शेष है

III. निबंध (५०० शब्द लगभग) : [15M/8P]

IV. साहित्य का इतिहास : [20M/12P]

(क) वीरगाथा काल की विशेषताएँ (प्रमुख कविः चंदरबरदाई एवं विद्यापति)
(ख) भक्ति काल की निर्गुण और सगुण धाराओं की सामान्य विशेषताएँ (प्रमुख कवि-कबीर, सूर, मीरा, तुलसी और जायसी)
(ग) रीतिकाल की सामान्य विशेषताएँ (प्रमुख कवि : केशवदास, बिहारी और घनानंद)
(घ) आधुनिक काल की प्रमुख प्रवृत्तियाँ- भारतेन्दु युग, छायावाद युग और प्रगतिशील साहित्य (संक्षिप्त परिचय)

V. व्याकरण : (वाक्य संशोधन, लिंग, उपसर्ग, प्रत्यय) [15M/15P]

CLASS XII

Full marks – 100

I. गद्य [30M/34P]

निबंध -- साहित्य-महावीर प्रसाद द्विवेदी
कहानी -- हिंसा परमो धर्मः- प्रेमचंद,
अपना रास्ता लो बाबा-काशीनाथ सिंह
एकांकी -- लिपिस्टिक की मुस्कान-विष्णु प्रभाकर

II. पद्य : [20M/32P]

कबीर-१० दोहे (११-२०)
सूरदास-वात्सल्य के ५ पद (संख्या ६ से १०)
निराला-तोड़ती पत्थर, जल्दी जल्दी पैर बढ़ाओ
सुमित्रा नन्दन पंत-प्रथम रश्मि, संध्या का झुटपुट
सर्वेश्वर दयाल सक्सेना- जाड़े की धूप, कभी मत करो माफ

III. पत्र / रिपोर्ताज : [10M/8P]

IV. पारिभाषिक शब्दावली : [5M/3P]

V. व्याकरण : (समास, संधि, कारक-चिह्न, वचन, वाक्य संशोधन) [20M/15P]

VI. अनुवाद - अंग्रेजी से हिन्दी : [15M/8P]

नेपाली - ए

एघारौं श्रेणीका निम्ति

पूर्णाङ्क - १००

कथा र गद्य	३०
कविता	२०
व्याकरण र रचना	५०

कथा भाग

१. रूपनारायण सिन्हा	धनमतीको सिनेमा स्वप्न
२. गुरुप्रसाद मैनाली	परालको आगो
३. शिबकुमार राई	पालोको पैंचो
४. वीरविक्रम गुरुङ	तिम्रो बासित पैसा छैन

गद्य भाग

१. लक्ष्मीप्रसाद देवकोटा	आषाढको पन्ध
२. पारसमणि प्रधान	हाम्रो गुन्दुक कम्पनी
३. राजनारायण प्रधान	गान्धी
४. रामलाल अधिकारी	रामलाल र म

कविता भाग

१. भानुभक्त आचार्य	बालाजि वर्णन
२. धरणीधर कोइराला	साहित्य-सुधा
३. अगमसिंह गिरी	छोरोलाई
४. हरिभक्त कटुवाल	दाइ कविता! खै कविता!
५. रवीन्द्रनाथ ठाकुर	प्रार्थना
६. बालकृष्ण सम	स्वर्ग आफै बन्छ

व्याकरण र रचना

१. निबन्ध लेखन १५

२. भाव विस्तार, सारांश लेखन, सृंजनात्मक लेखन, पत्र लेखन, वार्ता लेखन, संवाद लेखन, वाद-विवाद लेखन, अनि विज्ञापनको खेस्रा तयारी १५

३. व्याकरणिक कोटिहरू-संज्ञा, सर्वनाम, विशेषण, क्रियापद, अव्यय-परिभाषा, प्रकार अनि उदाहरण १०

४. नेपाली शुद्ध लेखनका उपाय र वर्णोच्चारण अभ्यास-हस्व-दीर्घ प्रयोग, लिङ्ग र वचनको प्रयोग पुरुषको प्रयोग, नेपाली वर्णोच्चारण अभ्यास ०५

५. अनुवाद- अङ्ग्रेजीबाट नेपालीमा ०५
नेपालीबाट अङ्ग्रेजीमा

बाह्रौं श्रेणीका निम्ति

पूर्णाङ्क - १००

कथा र गद्य	१५
कविता	१५
उपन्यास (द्रुतपाठ)	१०
नाटक	१०
व्याकरण र रचना	३५
नेपाली साहित्यको विकासको परिचयात्मक परिचय	१५

कथा भाग

१. इन्द्रबहादुर राई	भक्तलाल र म
२. गोविन्द गोठाले	मालिकको कुकुर
३. पारिजात	वधशाला आउँदा जाँदा
४. चेखव	वानका

उपन्यास

१. प्रकाश कोविद्	तर कहिले ?

गद्य भाग

१. रामकृष्ण शर्मा	प्यारो सपना
२. भैरव अर्याल	कवि चम्रेलजी : एक शब्दचित्र
३. शरद् सिन्हा	कम्प्यूटरको उद्‌भव

कविता भाग

१. लेखनाथ पौडयाल	काल महिमा
२. लक्ष्मीप्रसाद देवकोटा	म्हेन्दु (खण्डकाव्य)
३. गोपालप्रसाद रिमाल	एकदिन एकचोटि आउँछ
४. ईश्वरवल्लभ	सुनाखरी फूल कस्तो होला?

नाटक

१. बालकृष्ण सम	मुटुको व्यथा

नेपाली साहित्यको ऐतिहासिक विकासक्रमको परिचय

१. नेपाली कथा, उपन्यास, कविता, साहित्यिक निबन्ध अनि नाटक-उद्‌भव अनि विकासबारे परिचयात्मक अध्ययन १५

व्याकरण र रचना

१. व्याकरणिक उपकोटिहरू-लिङ्ग, वचन, पुरुष, कारक र काल-परिचय, प्रकार र उदाहरण ०५

नेपाली शब्द रचना

समास विधि, सन्धि विधि, द्रातु र प्रत्यय-हरूको परिचय ०५

२. छन्द, अलङ्कार, उखान, तुक्का र वाग्धरा

छन्द-छन्दको अर्थ, परिभाषा र छन्द केलाउने विधिसहित इयाउरे, सवाई, सेलो, अनुष्टुप, तोटक, शार्दूलविक्रीडित, शिखरिणी र मालिनी छन्दहरूका लक्षण अनि उदाहरण ०८

अलङ्कार-अर्थ, परिभाषा र अनुप्रास, यमक, श्लेष, उपमा, उत्प्रेक्षा, दीपक र अतिशयोक्ति अलङ्कारहरूको लक्षण अनि उदाहरण ०६

उखान, तुक्का र वाग्धराहरूको अर्थसहित वाक्यमा प्रयोग ०६

३. नेपाली वाक्य परिचय-वाक्यको परिभाषा र प्रमुख भेदहरूको सोदाहरण परिचय ०५

Considering the load of the syllabus in Nepali A & B, Some pieces have been deleted. Again previously in the printed syllabi some asterisks (*) were marked erroneously. In this bifurcated syllabi of Nepali A & B, pieces mentioned are final, which is applicable from the academic session 2005-2006. Inconvenience regretted.

[M/P] - Number of Marks / Number of Periods

नेपाली - वि

एघारौं श्रेणीका निम्ति

पूर्णाङ्क - १००

कथा र गद्य	३०
कविता	२०
व्याकरण र रचना	५०

कथा र गद्य भाग

१. रूपनारायण सिंह	अन्नपूर्णा
२. गुरुप्रसाद मैनाली	नासो
३. शिवकुमार राई	धन भला गाँठीका
४. जगत् छेत्री	होली वसन्त ऋतुको उत्सव
५. रामलाल अधिकारी	बिचरो कुखुरो

कविता भाग

१. भानुभक्त आचार्य	चपला अबला
२. पारसमणि प्रधान	मानिस
३. लक्ष्मीप्रसाद देवकोटा	जिन्दगीको मौसम
४. अगमसिंह गिरी	चियाबारीका सहिदहरू
५. जस योन्जन प्यासी	मन्जा बुद्धिको द्रागोमा

व्याकरण र रचना

१. निबन्ध लेखन — १५

२. भाव विस्तार, सारांश लेखन, सृजनात्मक लेखन, पत्र लेखन, वार्ता लेखन अनि विज्ञापनको खेस्रा तयारी — १५

३. व्याकरणिक कोटिहरू–संज्ञा, सर्वनाम, विशेषण, क्रियापद परिभाषा, प्रकार अनि उदाहरण — ०५

४. नेपाली शुद्ध लेखनका उपाय–ह्रस्व-दीर्घ प्रयोग, लिङ्ग, वचन र पुरुषको प्रयोग — ०५

५. अनुवाद- अङ्ग्रेजीबाट नेपालीमा — ०५

नेपालीबाट अङ्ग्रेजीमा — ०५

बाह्रौं श्रेणीका निम्ति

पूर्णाङ्क - १००

कथा र गद्य	१५
कविता	१५
उपन्यास (द्रुतपाठ)	१०
नाटक	१०
व्याकरण र रचना	३५
नेपाली साहित्यको विकासको परिचयात्मक इतिहास	१५

कथा र गद्य भाग

१. इन्द्रबहादुर राई	छुट्टयाइयो
२. हायमनदास राई किरात	सात माइलको खुट्टी
३. लैनसिंह बाङ्देल	मूर्तिकारको धोको
४. लक्ष्मीप्रसाद देवकोटा	शिक्षा
५. पारसमणि प्रधान	नेपाली साहित्यमा उखानको स्थान
६. राजनारायण प्रधान	राहुल सांकृत्यायन

उपन्यास

१. इन्द्र सुन्दास	जुनेली रेखा

कविता भाग

१. लेखनाथ पौडयाल	नैतिक दृष्टान्त
२. बालकृष्ण सम	रुख नकाट दाउरे दाइ
३. माधवप्रसाद धिमिरे	लाग्दछ मलाई रमाइलो
४. लक्खीदेवी सुन्दास	उत्सर्ग
५. भूपि शेरचन	मेरो चोक
६. गोपालसिंह नेपाली	सुख-दुःख

नाटक

१. विजय मल्ल	कोही किन बरबाद होस्

West Bengal Council of Higher Secondary Education

Vidyasagar Bhavan, 9/2 Block–DJ, Sector-II
Salt Lake City, Kolkata–700091

No. L/Secy/86/05 Date : 19.08.2005

From : Secretary
W.B. Council of H.S. Education

To : The Heads of all Higher Secondary Institutions

Sub : Establishment of the West Bengal State Council of Vocational Education and Training

Sir,

With reference to the above subject I am directed to inform you that in order to develop the standard of vocational education and training in West Bengal, State Government has already established a separate Council named as West Bengal State Council of Vocational Education and Training under the West Bengal State Council of Vocational Education and Training Act, 2005 (West Bengal Act VII of 2005).

In view of the above and interms of G. O. No. 970/1(3)–SE(S) 01.08.05 from the academic session 2005-2006 onward all the Higher Secondary Institutions having vocational stream course will be under the control of the West Bengal State Council of Vocational Education for the vocational stream course only and all the students intending to study vocational stream course will follow the presicribed syllabus of studies prescribed by the aforesaid council.

Yours faithfully

(Debasish Sarkar)
Secretary

West Bengal Council of Higher Secondary Education

Vidyasagar Bhavan, 9/2 Block–DJ, Sector-II
Salt Lake City, Kolkata–700091

No. L/Secy/86A/05 Date : 19.08.2005

From : The Secretary
West Bengal Council of High Secondary Education

To : The Heads of all Higher Secondary Institution.

Sir / Madam.

I am directed to mention below the schedule for distribution and submission of various types of forms of the council :

Enrolment Forms for Continuing/Special Candidates (2006 H.S. Examination)
By the Institution to the Coucil :

Without Late fine — 06. 09. 2005 (Tuesday)
With Late fine — 13. 09. 2005 (Tuesday)

Enrolment Forms for Regular Candidates (2006 H.S. Examination)
By the Institution to the Coucil :

Without Late fine — 03. 01. 2006 (Tuesday)
With Late fine — 10. 01. 2006 (Tuesday)

Revised last Date for Submission of Filled in Registration Forms By the Institution to the council (Season 2005-2006)
By the Institution to the Coucil :

Without Late fine 04. 10. 2005 (Tuesday)
With Late fine 20. 10. 2005 (Thursday)
Copies of Registration form other than the first copy will not be accepted.

Dates of Distribution of Blank Enrolment and registration Forms : (From Regional Office)
By the Institution to the Coucil :

A) C. C/SPL (2006) — From 02.08.2005 (Tuesday)
B) Registration Form 2005-2006 — From 06.09.2005 (Tuesday)
C) Regular 2006 — From 08.11.2005 (Tuesday)

All are requested to adhere to the above sehedule.

Last date for submission of forms will not be extended under any circumstances.

Thanking you
Yours faithfully,

D. Sarkar.

(Debasish Sarkar)
Secretary
W. B. Council of Higher Secondary Education

West Bengal Council of Higher Secondary Education

Vidyasagar Bhavan, 9/2 Block–DJ, Sector-II
Salt Lake City, Kolkata–700091

No. L/Secy/87/05 Date : 19.08.2005

From : The Secretary
West Bengal Council of High Secondary Education

To : The Heads of all Higher Secondary Institutions.

Sub : Changes in the Higher Secondary Examination from the academic session 2005- 2006 on wards

Sir/Madam,

I am directed to invite your kind attention to the following changes in the Higher Secondary Examination from the **Academic Session 2005-2006**.

1. The present Higher Secondary Examination will be separated into two examination — one at the end of class XI and another at the end of class XII.
2. Examination at the end of class XI will be conducted by the respective Institution on the basis of the syllabus to be covered in class XI as specified by the council. Examination at the end of class XII will be conducted by the council only on the basis of the syllabus covered in class XII as specified by the council and the result will be published by the council centrally.
3. Question paper for class XI examination will be prepared by the council for a temporary period, but the assessment of answer scripts would be done by the respective Institution.
4. Schedule for class XI examination and the contents of syllabus to be covered in class XI and XII will be intimated by the council in due course.
5. The Higher Secondary examination Mark Sheet of class XII will show only the marks obtained in class XII examination conducted by the council.
6. Necessary changes in Examination Regulation of the council will be done in due course.

All are requested to note that if any question in relation to the above changes arises the same may be referred to the council for Interpretation.

(Debasish Sarkar)
Secretary
W. B. Council of Higher Secondary Education

West Bengal Council of Higher Secondary Education

Vidyasagar Bhavan, 9/2 Block–DJ, Sector-II
Salt Lake City, Kolkata–700091

Programme of Higher Secondary Examination — 2006 (General And External)

Date	Morning (From 10 a.m. to 1 p.m.)	Afternoon (From 2 p.m. to 5 p.m.)
17/03/2006 Friday	Bengali(A), Hindi(A), Nepali(A), Bengali(B), Hindi(B), Nepali(B), Santali, Urdu, Tamil, Telugu, Malyalam, Oriya, Marathi, Gujrathi, Punjabi, Assamese, Modern Tibetan, Alternative English (Paper I)	Bengali(A), Hindi(A), Nepali(A), Bengali(B), Hindi(B), Nepali(B), Santali, Urdu, Tamil, Telugu, Malyalam, Oriya, Marathi, Gujrathi, Punjabi, Assamese, Modern Tibetan, Alternative English (Paper II)
20/03/2006 Monday	English (A) Paper I English (B) Paper I	English (A) Paper II English (B) Paper II
22/03/2006 Wednesday	Chemistry Accountancy (Paper I)	Chemistry Accountancy (Paper II)
24/03/2006 Friday	History (Paper I)	History (Paper II)
27/03/2006 Monday	Mathematics(Paper I)	Mathematics(Paper II)
29/03/2006 Wednesday	Physics, Nutrition, Education, Business Organisation (Paper I)	Physics, Nutrition, Education, Business Organisation (Paper II)
31/03/2006 Friday	Biological Sciences, Botany, Zoology, Physiology, Home Management & Home Nursing, Business Economics including Business Mathematics (Paper I)	Biological Sciences, Botany, Zoology, Physiology, Home Management & Home Nursing, Business Economics including Business Mathematics (Paper II)
03/04/2006 Monday	Statistics, // Classical Languages, // Modern Foreign Languages, Agronomy (Paper I)	Statistics, // Classical Languages, // Modern Foreign Languages, Agronomy (Paper II)
05/04/2006 Wednesday	Computer Science, Modern Computer Application (Paper I) * Music (1st half only)	Computer Science, Modern Computer Application (Paper II)

Date	Morning (From 10 a.m. to 1 p.m.)	Afternoon (From 2 p.m. to 5 p.m.)
08/04/2006 Saturday	Psychology, Geography, Economic Geography (Paper I)	Psychology, Geography, Economic Geography (Paper II)
10/04/2006 Monday	Political Science, Geology, Public Administration, Sociology (Paper I)	Political Science, Geology, Public Administration, Sociology (Paper II)
12/04/2006 Wednesday	Economics, Anthropology (Paper I) * Fine Arts & Crafts (1st half only)	Economics, Anthropology (Paper II)
13/04/2006 Thursday	Philosophy (Paper I)	Philosophy (Paper II)

* The Examination of these subjects will be of three hours duration

// Classical Languages : Sanskrit, Pali, Persian, Arabic

/1 Modern Foreign Languages : French, German, Russian, Chinese.

Dinendra Narayan Munshi

(Dinendra Narayan Munshi)

Vidyasagar Bhavan

Deputy Secretary (Examination)

West Bengal Council of Higher Secondary Education

Vidyasagar Bhavan, 9/2, Block - DJ, Sector - II, Salt Lake, Kolkata - 700091.

Programme of Higher Secondary Examination — 2006
(Vocational)

Date	Morning (From 10 a.m to 1 p.m)	Afternoon (From 2 p.m to 5 p.m)
17/03/2006 Friday	Bengali, Hindi, Urdu, Nepali	
20/03/2006 Monday	English	
24/03/2006 Friday	i) Entrepreneurship & Basic Theory (Technical Group) ii) Entrepreneurship & Basic Theory (Agriculture Group) iii) Entrepreneurship & Basic Theory (Trade & Commerce Group)	
27/03/2006 Monday	Chemistry	Business Economics including Business Mathematics
29/03/2006 Wednesday	Mathematics	Economic Geography
31/03/2006 Friday	Physics	Stenography (Trade & Commerce)
05/04/2006 Wednesday	Biological Sciences	Banking (Trade & Commerce)
08/04/2006 Saturday	* Technical Drawing (For Technical Course only)	Accountancy
10/04/2006 Monday	Theory of Different Areas of **Agriculture Group** i) Principle of Crop Production ii) Horticulture and Fruit & Vegetable Preservation iii) Poultry Farming iv) Pisciculture **Technical Group** i) Mechanical Servicing & Maintenance ii) Farm Equipments & Maintenance iii) Automobile Servicing & Maintenance iv) Fabrication Practice v) Electrical Servicing & Maintenance vi) Civil Engineering & Maintenance vii) Water Supply & Sanitary Service viii) Radio & Electronic Servicing Maintenance **Trade & Commerce Group** Office Procedure & Routine	
13/04/2006 Thursday	Accountancy (Trade & Commerce)	Business Organisation

* The examination of this subject will be of two hours duration. The Council may, if necessary, adjust the above dates with due intimation to all concerned.

All Practical Examinations should be completed within 21st April, 2006, the scripts, marks-foils and attendance cum signature roll of Practical examinations must be submitted to the office of the HS Council by 24.04.2006 (Monday) positively.

Vidyasagar Bhavan

(Dinendra Narayan Munshi)
Deputy Secretary (Examination)

বাংলা 'ক' পাঠক্রম

একাদশ শ্রেণি

কবিতা	—	২০
গদ্য	—	২০
নাটক	—	১০
ছোটোগল্প	—	১০
সাহিত্যের ইতিহাস	—	১৫
বাক্য পরিবর্তন/উক্তি পরিবর্তন	—	৫
প্রবাদ-প্রবচন ও বাগ্‌ধারা	—	৫
অনুবাদ	—	৫
গল্প রচনা/পত্র রচনা/সংলাপ রচনা /প্রতিবেদন রচনা	—	১০
মোট নম্বর		১০০

কবিতা (২০ন/১৩পি)

পদ্মাবতীর বিবাহমঙ্গল : সৈয়দ আলাওল
আত্মবিলাপ : মধুসূদন দত্ত
নবান্ন : যতীন্দ্রনাথ সেনগুপ্ত
বর্ণমালা, আমার দুঃখিনী বর্ণমালা : শামসুর রাহমান

গদ্য (২০ন/১২পি)

ইস্পাতের মেয়ে : বঙ্কিমচন্দ্র চট্টোপাধ্যায়
তোতাকাহিনী : রবীন্দ্রনাথ ঠাকুর
শূদ্র জাগরণ : স্বামী বিবেকানন্দ

নাটক (১০ন/১৩পি)

ঝাঁসীর রানির শেষ যুদ্ধ : তৃপ্তি মিত্র
পাপ-পুণ্য : রবীন্দ্রনাথ ঠাকুর

ছোটোগল্প (১০ন/৯পি)

শ্রীপতি সামন্ত : বনফুল
চতুর্থ পানিপথের যুদ্ধ : সুবোধ ঘোষ

সাহিত্যের ইতিহাস (১ম - ১৭তম অধ্যায়) (১৫ন/৩০পি)

প্রস্তাবনা

১। বাংলা ভাষার বিকাশের আগে বাঙালি কবিদের সাহিত্যচর্চার সংক্ষিপ্ত বিবরণ, বাংলা সাহিত্যের যুগবিভাগ ঃ আদি, মধ্য ও আধুনিক।

আদি যুগ

২। চর্যাপদ ঃ ঐতিহাসিক গুরুত্ব, সামগ্রিক সাহিত্যমূল্য, কয়েকজন প্রধান কবির নাম।

মধ্য যুগ

৩। তুর্কি আগমন ও তার সামাজিক-সাংস্কৃতিক পরিণাম।
৪। শ্রীকৃষ্ণকীর্তন এবং বৈষ্ণব পদাবলির সংক্ষিপ্ত পরিচয় (আলোচ্য কবি — বিদ্যাপতি, চণ্ডীদাস, জ্ঞানদাস ও গোবিন্দদাস)
৫। অনুবাদ-কাব্য ঃ রামায়ণ, ভাগবত ও মহাভারতের অনুবাদ সম্বন্ধে সংক্ষিপ্ত আলোচনা।
৬। মঙ্গলকাব্য রচনার সামাজিক কারণ ও মঙ্গলকাব্যের সাধারণ বৈশিষ্ট্য।
৭। তিন মঙ্গলকাব্যের সংক্ষিপ্ত কাহিনি ও তিন বিশিষ্ট কবির (মুকুন্দ চক্রবর্তী, কেতকাদাস ক্ষেমানন্দ ও ঘনরাম চক্রবর্তী) সংক্ষিপ্ত পরিচয়।
৮। বাঙালির সমাজ ও সাহিত্যে চৈতন্যদেবের আবির্ভাবের গুরুত্ব।
৯। দুটি প্রধান চৈতন্যজীবনী কাব্যের (বৃন্দাবন দাস ও কৃষ্ণদাস কবিরাজ) সাধারণ পরিচয় ও ঐতিহাসিক গুরুত্ব।
১০। আরাকান রাজসভার কবিদের কাব্যচর্চার গুরুত্ব; দৌলত কাজি ও সৈয়দ আলাওল সম্পর্কে সংক্ষিপ্ত আলোচনা।
১১। অষ্টাদশ শতাব্দীর যুগবৈশিষ্ট্য, যুগের প্রেক্ষিতে ভারতচন্দ্র ও রামপ্রসাদের কাব্যচর্চার সংক্ষিপ্ত পরিচয়।

আধুনিক যুগ (ক) উনবিংশ শতাব্দী

১২। নবজাগরণের সংক্ষিপ্ত ইতিহাস ঃ বাঙালির সমাজ ও সাহিত্যে তার প্রভাব

১৩। গদ্যসাহিত্য ঃ

(ক) প্রধান ধারা - ফোর্ট উইলিয়াম কলেজের লেখকগোষ্ঠী (নামোল্লেখ করে সাধারণ পরিচয় ঈশ্বরচন্দ্র বিদ্যাসাগর, বঙ্কিমচন্দ্র)

(খ) বিকল্প ধারা ঃ হুতোম প্যাঁচার নকশা

১৪। বাংলা সাহিত্যচর্চার আধুনিকীকরণে ছাপাখানা, সংবাদপত্র ও সাময়িক পত্রের ভূমিকা ঃ সংবাদ প্রভাকর, বঙ্গদর্শন - সংক্ষিপ্ত পরিচয়।

১৫। কাব্য ঃ

(ক) মহাকাব্য ও আখ্যান কাব্য ঃ সাধারণ পরিচয় মধুসূদন সম্বন্ধে বিশেষ আলোচনা

(খ) গীতিকাব্য ঃ (সংক্ষেপে লিরিকের বৈশিষ্ট্য আলোচনা) এই শাখার নানা কবির নামোল্লেখ করে বিহারীলাল ও তাঁর দুজন প্রধান অনুগামীর কাব্যচর্চার সংক্ষিপ্ত পরিচয়।

১৬। নাটক ঃ

মধুসূদন দত্ত, দীনবন্ধু মিত্র, গিরিশচন্দ্র ঘোষ

১৭। কথাসাহিত্য ঃ

(ক) প্রধান ধারা - বঙ্কিমচন্দ্রের বিশেষ আলোচনা

(খ) বিকল্প ধারা - তারকনাথ গঙ্গোপাধ্যায়, ত্রৈলোক্যনাথ মুখোপাধ্যায়

বাক্য পরিবর্তন/উক্তি পরিবর্তন (৫ন/৪পি)

প্রবাদ-প্রবচন ও বাগ্‌ধারা (৫ন/৪পি)

অনুবাদ (৫ন/৫পি)

গল্প রচনা/পত্র রচনা/ সংলাপ রচনা/প্রতিবেদন রচনা (১০ন/১০পি)

দ্বাদশ শ্রেণি

কবিতা	—	২০
গদ্য	—	২০
ছোটোগল্প	—	১০
সাহিত্যের ইতিহাস	—	১৫
পরিভাষা	—	৫
প্রবন্ধ রচনা	—	১৫
বাংলা ভাষার সংক্ষিপ্ত ইতিহাস	—	১০
ছন্দ	—	৫
মোট নম্বর		১০০

কবিতা (২০ন/১৭পি)

ওরা কাজ করে ঃ রবীন্দ্রনাথ ঠাকুর
আমার কৈফিয়ত ঃ নজরুল ইসলাম
আঠারো বছর বয়স ঃ সুকান্ত ভট্টাচার্য
রাস্তা কারও একার নয় ঃ বীরেন্দ্র চট্টোপাধ্যায়

গদ্য (২০ন/১৩পি)

মানবতন্ত্র ঃ আবুল ফজল
শিল্পী ঃ মানিক বন্দ্যোপাধ্যায়
শব্দের আশীর্বাদ, শব্দের অভিশাপ ঃ ডাঃ আবিরলাল মুখোপাধ্যায়

ছোটোগল্প (১০ন/১১পি)

গুপ্তধন ঃ রবীন্দ্রনাথ ঠাকুর
একটি তুলসী গাছের কাহিনী ঃ সৈয়দ ওয়ালীউল্লাহ

সাহিত্যের ইতিহাস (১৮তম - ২৩তম অধ্যায়) (১৫ন/২৫পি)

বিংশ শতাব্দী

১৮। এই শতাব্দীর প্রধান প্রধান ঐতিহাসিক ঘটনা, বাঙালির সমাজজীবনে ও সাহিত্যচর্চায় যেগুলির বিশেষ প্রভাব পড়েছে; সংক্ষিপ্ত বিবরণ (বিভিন্ন রাজনৈতিক আন্দোলন, দুটি বিশ্বযুদ্ধ, মন্বন্তর ও দেশভাগ - আলোচনায় এই চারটি বিষয়কে প্রাধান্য দিতে হবে)।

১৯। কাব্য ঃ সংক্ষিপ্ত বিবরণ ও বিভিন্ন প্রবণতার সাধারণ পরিচয়

(ক) রবীন্দ্রকাব্য ঃ প্রবণতা অনুযায়ী পর্ব বিভাগ করে আলোচনা।

(খ) রবীন্দ্রেতর ঃ নজরুল ইসলাম, যতীন্দ্রনাথ সেনগুপ্ত, মোহিতলাল মজুমদার।

(গ) রবীন্দ্রোত্তর ঃ জীবনানন্দ দাশ, সুধীন্দ্রনাথ দত্ত, সুভাষ মুখোপাধ্যায়।

২০। গদ্যসাহিত্য ঃ সংক্ষিপ্ত পর্যালোচনা - রবীন্দ্রনাথ, প্রমথ চৌধুরী।

২১। কথাসাহিত্য ঃ (উপন্যাস ও ছোটোগল্প) সংক্ষিপ্ত পর্যালোচনা ঃ রবীন্দ্রনাথ, শরৎচন্দ্র, তারাশঙ্কর, মানিক বন্দ্যোপাধ্যায়, বিভূতিভূষণ বন্দ্যোপাধ্যায়, পরশুরাম, প্রেমেন্দ্র মিত্র, বনফুল বিশেষভাবে উল্লেখযোগ্য।

২২। নাটক ঃ সংক্ষিপ্ত বিবরণ।

(ক) প্রচলিত ধারার নাটক ঃ দ্বিজেন্দ্রলাল রায়, ক্ষীরোদপ্রসাদ বিদ্যাবিনোদ।

(খ) রবীন্দ্রনাটক।

(গ) গণনাট্য ও নবনাট্য ঃ বিজন ভট্টাচার্য, উৎপল দত্ত।

২৩। সাময়িক পত্র ঃ সবুজপত্র, কল্লোল, পরিচয় (প্রতি ক্ষেত্রে প্রকাশের কালসীমা, বৈশিষ্ট্য ও লেখকগোষ্ঠীর সংক্ষিপ্ত বিবরণ।)

পরিভাষা (৫ন/৪পি)

প্রবন্ধ রচনা (১৫ন/৫পি)

বাংলা ভাষার সংক্ষিপ্ত ইতিহাস (১০ন/২১পি)

(ক) ভারতের ৪টি ভাষাবংশ ঃ সংক্ষিপ্ত পরিচয়।

(খ) ভারতীয় আর্যভাষার ক্রমবিকাশের তিনটি স্তর — সংক্ষিপ্ত পরিচয়।

(গ) নব্য ভারতীয় আর্যভাষার শাখা-প্রশাখা ঃ সংক্ষিপ্ত পরিচয়।

(ঘ) প্রাচীন ভারতীয় আর্যভাষা থেকে বাংলা ভাষার ক্রমবিকাশের সরল পথরেখা।

(ঙ) বাংলা ভাষার যুগবিভাগ

ভাষা ও উপভাষার সম্পর্ক ;বাংলার মৌখিক ও সাহিত্যিক উপভাষা ; মৌখিক উপভাষার স্থান ও লক্ষণ; সাহিত্যিক গদ্য উপভাষার (চলিত, সাধু) বিবর্তন ও তুলনা।

ছন্দ (৫ন/৪পি)

ন - নম্বর / পি - পিরিয়ড

বাংলা 'খ' পাঠক্রম

একাদশ শ্রেণি

গদ্য	—	২০
কবিতা	—	২০
বঙ্গানুবাদ	—	১০
ব্যাকরণ	—	২০
বোধ-বিচার	—	৩০
মোট নম্বর		১০০

গদ্য (২০ন/২০পি)

আমার দুর্গোৎসব ঃ বঙ্কিমচন্দ্র চট্টোপাধ্যায়
অনধিকার প্রবেশ ঃ রবীন্দ্রনাথ ঠাকুর

কবিতা (২০ন/২০পি)

বঙ্গভূমির প্রতি ঃ মধুসূদন দত্ত
হতভাগ্যের গান ঃ রবীন্দ্রনাথ ঠাকুর
মানুষ ঃ নজরুল ইসলাম

বঙ্গানুবাদ (১০ন/১০পি)

ব্যাকরণ (২০ন/২০পি)

বোধ-বিচার (৩০ন/৩০পি)

দ্বাদশ শ্রেণি

গদ্য	—	২০
কবিতা	—	২০
প্রবাদ ও প্রবচন	—	১০
প্রবন্ধ রচনা	—	২০
ভাব-সম্প্রসারণ/সংক্ষিপ্তসার/পত্র রচনা /প্রতিবেদন রচনা	—	১৫
বঙ্গানুবাদ	—	১০
পরিভাষা	—	৫
মোট নম্বর		১০০

গদ্য (২০ন/২০পি)

লক্ষ্য ও শিক্ষা ঃ রবীন্দ্রনাথ ঠাকুর
দিনু রক্ষিত ঃ বিভূতিভূষণ মুখোপাধ্যায়

কবিতা (২০ন/২০পি)

বাংলার মুখ আমি দেখিয়াছি ঃ জীবনানন্দ দাশ
নবান্ন ঃ যতীন্দ্রনাথ সেনগুপ্ত
বিদ্রোহের গান ঃ সুকান্ত ভট্টাচার্য

প্রবাদ ও প্রবচন (১০ন/১০পি)

প্রবন্ধ রচনা (২০ন/২০পি)

শব্দসীমা অনধিক ৩০০ শব্দ

ভাব-সম্প্রসারণ/সংক্ষিপ্তসার/পত্র রচনা/ প্রতিবেদন রচনা (১৫ন/১৫পি)

যে কোনো একটি

বঙ্গানুবাদ (১০ন/১০পি)

পরিভাষা (৫ন/৫পি)

ন - নম্বর / পি - পিরিয়ড

CLASS XI

Full Marks – 100

गद्य	30
काव्यः	20
हिन्दी साहित्य का इतिहास	20
निबंध लेखन	15
व्याकरण	15

I. गद्य [30M/ 30P]

निबंध

1) कविता क्या है? रामचंद्र शुक्ल (Page No. 3 to 6) upto... जो मूर्त और गोचर होंगे)
2) विकलांग श्रद्धा का दौर : हरिशंकर परसाई

कहानी

1) आकाशदीप : जयशंकर प्रसाद
2) सबीना के चालीस चोर : नासिरा शर्मा

एकांकी

1) लक्ष्मी का स्वागत : उपेंद्रनाथ अश्क

II. काव्यः [20M/38P]

1) मीरा-पद (संख्या १ से ५)
2) सूरदास- वात्सल्य के ५ पद (१ से ५)
   भ्रमरगीत के ५ पद (१ से ५)
3) बिहारी - दोहा संख्या (१ से १०)
4) निराला - बादल राग, अभी न होगा मेरा अन्त
5) रामधारी सिंह दिनकर - परंपरा, कलम आज उनकी जय बोल
6) धूमिल - मोचीराम

III. हिन्दी साहित्य का इतिहास : [20M/15P]

1) खड़ी बोली हिंदी का विकास : संक्षिप्त परिचय
2) हिंदी नवजागरण, भारतेन्दु युगीन साहित्य की प्रवृत्तियाँ, द्विवेदी युग (प्रमुख लेखक - भारतेन्दु हरिशचन्द्र, बालकृष्ण भट्ट, महावीर प्रसाद द्विवेदी, बालमुकुंद गुप्त)
3) छायावाद की विशेषताएँ (प्रमुख कवि - प्रसाद, निराला, पंत और महादेवी वर्मा)
4) प्रगतिशील साहित्य का आंदोलन : प्रमुख विशेषतांए और प्रमुख लेखक (प्रेमचंद, यशपाल, नागार्जुन, रामविलास शर्मा)
5) नए आधुनिक साहित्य : प्रयोगवाद, नई कविता, नई कहानी की प्रमुख विशेषताएँ (प्रमुख लेखक-अज्ञेय और निर्मल वर्मा)
6) उपन्यास और नाटक का उद्भव और विकास।

IV. निबंध लेखन : [15M/7P]

V. व्याकरण (पाठ्य-पुस्तक पर आधारित) : [15M/10P]

1) वाक्य संशोधन, वाक्य परिवर्तन, वचन, लिंग निर्णय; उपसर्ग, प्रत्यय।

CLASS XII

Full Marks – 100

गद्य	30
काव्यः	20
सहायक पाठ्य पुस्तक (कोई एक)	15
पारिभाषिक शब्दावली :	5
रिपोर्ताज अथवा पत्र लेखन	10
व्याकरण	20

I. गद्य [30M/40P]

निबंध

1) परंपरा : कुछ विचार कुछ प्रश्न - श्यामाचरण दुबे
2) ईश्वर अगर फूल और वृक्ष है - निर्मल वर्मा

कहानी

1) मंत्र : प्रेमचंद
2) रोज : अज्ञेय
3) झुटपुटा : भीष्म साहनी

एकांकी

1) मम्मी ठकुराइन : लक्ष्मीनारायण लाल

II. काव्यः [20M/32P]

1) कबीर - दोहे (दोहा सख्या १ से १०): ३ पद - अरे इन्ह दोउ राह न पाई; तोको पीव मिलेंगे घूंघट के पट, मोको कहां ढुंटे बंदे।
2) तुलसीदास (पाठय पुस्तक में दिए गए सभी पद)
3) प्रसाद : ले चल मुझे भुलावा देकर; अशोक की चिंता
4) नागार्जुन : वादल को घिरते देखा है; शासन की बंदूक
5) मुक्तिबोध : जन जन का चेहरा एक; पूंजीवादी समाज के प्रति
6) रघुवीर सहाय : हँसो हँसो जल्दी हँसो, दे दिया जाता हूँ।

III. सहायक पाठ्य पुस्तक (कोई एक) : [15M/10P]

1) निर्मला (उपन्यास) - प्रेमचंद
2) श्रंखला की कड़ियाँ (निबंध) - महादेवी वर्मा
3) आषाढ़ का एक दिन (नाटक) - मोहन राकेश

IV. पारिभाषिक शब्दावली : [5M/3P]

V. रिपोर्ताज अथवा पत्र लेखन : [10M/3P]

VI. व्याकरण : [20M/12P]

पाठ्य-पुस्तक पर आधारित-(वचन; कारक चिह्न; संधि; समास; उपसर्ग; प्रत्यय; वाक्य परिवर्तन; वाक्य विश्लेषण; वाक्य संशोधन।

HINDI — GROUP-B

CLASS XI

Full marks – 100

I. गद्य **[30M/36P]**

निबंध -- नाखून क्यों बढ़ते हैं : हजारीप्रसाद द्विवेदी
रजिया - रामवृक्ष बेनीपुरी
कहानी -- परदा-यशपाल, आर्द्रा - मोहन राकेश
एकांकी -- अधिकार का रक्षक उपेन्द्रनाथ अश्क

I. पद्य : **[20M/ 29P]**

रहीम - १ से १० दोहे
मीरा - १ से ५ पद
तुलसीदास - १ से ५ दोहे
जयशंकर प्रसाद - हे सागर संगम अरुण नील, अरुणयह मधुमय देश हमारा।
रामधारी सिंह दिनकर : समर शेष है

III. निबंध (५०० शब्द लगभग) : **[15M/8P]**

IV. साहित्य का इतिहास : **[20M/12P]**

(क) वीरगाथा काल की विशेषताएँ (प्रमुख कविः चंदरबरदाई एवं विद्यापति)
(ख) भक्ति काल की निर्गुण और सगुण धाराओं की सामान्य विशेषताएँ (प्रमुख कवि-कबीर, सूर, मीरा, तुलसी और जायसी)
(ग) रीतिकाल की सामान्य विशेषताएँ (प्रमुख कवि : केशवदास, बिहारी और घनानंद)
(घ) आधुनिक काल की प्रमुख प्रवृत्तियाँ- भारतेन्दु युग, छायावाद युग और प्रगतिशील साहित्य (संक्षिप्त परिचय)

V. व्याकरण : (वाक्य संशोधन, लिंग, उपसर्ग, प्रत्यय) **[15M/15P]**

CLASS XII

Full marks – 100

I. गद्य **[30M/34P]**

निबंध -- साहित्य-महावीर प्रसाद द्विवेदी
कहानी -- हिंसा परमो धर्मः- प्रेमचंद,
अपना रास्ता लो बाबा-काशीनाथ सिंह
एकांकी -- लिपिस्टिक की मुस्कान-विष्णु प्रभाकर

II. पद्य : **[20M/32P]**

कबीर-१० दोहे (११-२०)
सूरदास-वात्सल्य के ५ पद (संख्या ६ से १०)
निराला-तोड़ती पत्थर, जल्दी जल्दी पैर बढ़ाओ
सुमित्रा नन्दन पंत-प्रथम रश्मि, संध्या का झुटपुट
सर्वेश्वर दयाल सक्सेना- जाड़े की धूप, कभी मत करो माफ

III. पत्र / रिपोर्ताज : **[10M/8P]**

IV. पारिभाषिक शब्दावली : **[5M/3P]**

V. व्याकरण : (समास, संधि, कारक-चिह्न, वचन, वाक्य संशोधन) **[20M/15P]**

VI. अनुवाद - अंग्रेजी से हिन्दी : **[15M/8P]**

नेपाली - ए

एघारौं श्रेणीका निम्ति

पूर्णाङ्क - १००

कथा र गद्य	३०
कविता	२०
व्याकरण र रचना	५०

कथा भाग

१. रूपनारायण सिन्हा	घनमतीको सिनेमा स्वप्न
२. गुरुप्रसाद मैनाली	परालको आगो
३. शिबकुमार राई	पालोको पैंचो
४. वीरविक्रम गुरुङ	तिम्रो बासित पैसा छैन

गद्य भाग

१. लक्ष्मीप्रसाद देवकोटा	आषाढको पन्ध
२. पारसमणि प्रधान	हाम्रो गुन्दुक कम्पनी
३. राजनारायण प्रधान	गान्धी
४. रामलाल अधिकारी	रामलाल र म

कविता भाग

१. भानुभक्त आचार्य	बालाजि वर्णन
२. धरणीधर कोइराला	साहित्य-सुधा
३. अगमसिंह गिरी	छोरोलाई
४. हरिभक्त कटुवाल	दाइ कविता! खै कविता!
५. रवीन्द्रनाथ ठाकुर	प्रार्थना
६. बालकृष्ण सम	स्वर्ग आफै बन्छ

व्याकरण र रचना

१. निबन्ध लेखन १५

२. भाव विस्तार, सारांश लेखन, सृंजनात्मक लेखन, पत्र लेखन, वार्ता लेखन, संवाद लेखन, वाद-विवाद लेखन, अनि विज्ञापनको खेस्रा तयारी १५

३. व्याकरणिक कोटिहरू-संज्ञा, सर्वनाम, विशेषण, क्रियापद, अव्यय-परिभाषा, प्रकार अनि उदाहरण १०

४. नेपाली शुद्ध लेखनका उपाय र वर्णोच्चारण अभ्यास-ह्रस्व-दीर्घ प्रयोग, लिङ्ग र वचनको प्रयोग पुरुषको प्रयोग, नेपाली वर्णोच्चारण अभ्यास ०५

५. अनुवाद- अङ्ग्रेजीबाट नेपालीमा ०५
नेपालीबाट अङ्ग्रेजीमा

बाह्रौं श्रेणीका निम्ति

पूर्णाङ्क - १००

कथा र गद्य	१५
कविता	१५
उपन्यास (द्रुतपाठ)	१०
नाटक	१०
व्याकरण र रचना	३५
नेपाली साहित्यको विकासको परिचयात्मक परिचय	१५

कथा भाग

१. इन्द्रबहादुर राई	भक्तलाल र म
२. गोविन्द गोठाले	मालिकको कुकुर
३. पारिजात	वधशाला आउँदा जाँदा
४. चेखव	वानका

उपन्यास

१. प्रकाश कोविद्	तर कहिले ?

गद्य भाग

१. रामकृष्ण शर्मा	प्यारो सपना
२. भैरव अर्याल	कवि चम्रेलजी : एक शब्दचित्र
३. शरद् सिन्हा	कम्प्यूटरको उद्भव

कविता भाग

१. लेखनाथ पौडयाल	काल महिमा
२. लक्ष्मीप्रसाद देवकोटा	म्हेन्दु (खण्डकाव्य)
३. गोपालप्रसाद रिमाल	एकदिन एकचोटि आउँछ
४. ईश्वरवल्लभ	सुनाखरी फूल कस्तो होला?

नाटक

१. बालकृष्ण सम	मुटुको व्यथा

नेपाली साहित्यको ऐतिहासिक विकासक्रमको परिचय

१. नेपाली कथा, उपन्यास, कविता, साहित्यिक निबन्ध अनि नाटक-उद्भव अनि विकासबारे परिचयात्मक अध्ययन १५

व्याकरण र रचना

१. व्याकरणिक उपकोटिहरू-लिङ्ग, वचन, पुरुष, कारक र काल-परिचय, प्रकार र उदाहरण ०५

नेपाली शब्द रचना

समास विधि, सन्धि विधि, द्रातु र प्रत्यय-हरूको परिचय ०५

२. छन्द, अलङ्कार, उखान, तुक्का र वाग्धरा

छन्द-छन्दको अर्थ, परिभाषा र छन्द केलाउने विधिसहित इयाउरे, सवाई, सेलो, अनुष्टुप, तोटक, शार्दूलविक्रीडित, शिखरिणी र मालिनी छन्दहरूका लक्षण अनि उदाहरण ०८

अलङ्कार-अर्थ, परिभाषा र अनुप्रास, यमक, श्लेष, उपमा, उत्प्रेक्षा, दीपक र अतिशयोक्ति अलङ्कारहरूको लक्षण अनि उदाहरण ०६

उखान, तुक्का र वाग्धराहरूको अर्थसहित वाक्यमा प्रयोग ०६

३. नेपाली वाक्य परिचय-वाक्यको परिभाषा र प्रमुख भेदहरूको सोदाहरण परिचय ०५

Considering the load of the syllabus in Nepali A & B, Some pieces have been deleted. Again previously in the printed syllabi some asterisks (*) were marked erroneously. In this bifurcated syllabi of Nepali A & B, pieces mentioned are final, which is applicable from the academic session 2005-2006. Inconvenience regretted.

[M/P] - Number of Marks / Number of Periods

नेपाली - वि

एघारौं श्रेणीका निम्ति

पूर्णाङ्क - १००

कथा र गद्य	३०
कविता	२०
व्याकरण र रचना	५०

कथा र गद्य भाग

१. रूपनारायण सिंह	अन्नपूर्णा
२. गुरुप्रसाद मैनाली	नासो
३. शिवकुमार राई	धन भला गाँठीका
४. जगत् छेत्री	होली वसन्त ऋतुको उत्सव
५. रामलाल अधिकारी	बिचरो कुखुरो

कविता भाग

१. भानुभक्त आचार्य	चपला अबला
२. पारसमणि प्रधान	मानिस
३. लक्ष्मीप्रसाद देवकोटा	जिन्दगीको मौसम
४. अगमसिंह गिरी	चियाबारीका सहिदहरू
५. जस योन्जन प्यासी	मन्जा बुद्धिको ड्रागोमा

व्याकरण र रचना

१. निबन्ध लेखन १५

२. भाव विस्तार, सारांश लेखन, सृजनात्मक लेखन, पत्र लेखन, वार्ता लेखन अनि विज्ञापनको खेस्रा तयारी १५

३. व्याकरणिक कोटिहरू–संज्ञा, सर्वनाम, विशेषण, क्रियापद परिभाषा, प्रकार अनि उदाहरण ०५

४. नेपाली शुद्ध लेखनका उपाय–ह्रस्व-दीर्घ प्रयोग, लिङ्ग, वचन र पुरुषको प्रयोग ०५

५. अनुवाद- अङ्ग्रेजीबाट नेपालीमा ०५
नेपालीबाट अङ्ग्रेजीमा ०५

बाह्रौं श्रेणीका निम्ति

पूर्णाङ्क - १००

कथा र गद्य	१५
कविता	१५
उपन्यास (द्रुतपाठ)	१०
नाटक	१०
व्याकरण र रचना	३५
नेपाली साहित्यको विकासको परिचयात्मक इतिहास	१५

कथा र गद्य भाग

१. इन्द्रबहादुर राई	छुट्ट्याइयो
२. हायमनदास राई किरात	सात माइलको खुट्टी
३. लैनसिंह बाङ्देल	मूर्तिकारको धोको
४. लक्ष्मीप्रसाद देवकोटा	शिक्षा
५. पारसमणि प्रधान	नेपाली साहित्यमा उखानको स्थान
६. राजनारायण प्रधान	राहुल सांकृत्यायन

उपन्यास

१. इन्द्र सुन्दास	जुनेली रेखा

कविता भाग

१. लेखनाथ पौडयाल	नैतिक दृष्टान्त
२. बालकृष्ण सम	रुख नकाट दाउरे दाइ
३. माधवप्रसाद घिमिरे	लाग्दछ मलाई रमाइलो
४. लक्खीदेवी सुन्दास	उत्सर्ग
५. भूपि शेरचन	मेरो चोक
६. गोपालसिंह नेपाली	सुख-दुःख

नाटक

१. विजय मल्ल	कोही किन बरबाद होस्

MARATHI

CLASS XI

Prose	– 20
Poetry	– 20
Drama	– 10
Precis, Substance, Summary and Amplification	– 10
Grammar	– 15
History of Literature	– 15
Rapid Reader	– 10
Total Marks	100

Prose [20M/20P]

1. Achyut Balwanta Kolhatkar : *He tatya ani he tatya*
2. S. M. Mate : *Bhutakalacha parambya*
3. P. K. Atre : *Bastis varshapurviche Pune*
4. P. L. Deshpande : *Batatayachi chal ek chintan*

Poetry [20M/20P]

1. B. R. Tambe : *Rikame madhughat*
2. N. V. Tilak : *Vanavasi phul*
3. Madhavanuja : *Dipa visarjan*
4. Keshavasuta : *Tutari*
5. Vinayaka (V. J. Karandikar) : *Stri ani purush*
6. Bee (N. M. Gupte) : *Chapha*

Drama (Any one of the following) [10M/15P]

1. P. L. Deshpandc : *Ammaldar*
2. Nagesh Joshi : *Devamanus*
3. P. K. Atre : *Sastanga namaskar*

Precis, Substance, Summary and Amplification. [10M/10P]

Grammar [15M/10P]

1. Shabdanchya jati, lings, vachan (kinds of words, genders, number)
2. Vibhakti (Case)
3. Kala and artha (Tense and Moods)

History of Literature (1875-1950) [15M/20P]

The role of following authors to be studied
1. Y. K. Chiplongar,
2. N. C. Kelkar
3. H. N. Apte,
4. R. G. Godkari 5.Kusumagraja

Rapid Reader (Any one of the following) [10M/5P]

H.N. Apte : *Ushahkal* (Abridged ed.)
Nathmadhav : *Saviya Tandel* (do)

CLASS XII

Prose	– 20
Poetry	– 20
Essay	– 15
Story, letter, & speech writing	– 5
Grammar	– 15
History of Literature	– 15
Rapid Reader	– 10
Total Marks	100

Prose [20M/25P]

1. N. S. Phadke : *Raviwar*
2. V. S. Khandekar : *Chalishiche ghar*
3. Ananta Kanekar : *Puranatil vangi*
4. Shakuntala Paranjpe :*Mandaichi bas*

Poetry [20M/20P]

1. Sopandev Choudhuri : *Andhala*
2. Indira Santa : *Shela*
3. P. S. Rege : *Phule*
4. Kusumagraj : *Svapnanchi samapti*
5. Sanjivani Marathe : *Kavita sphurate kashi*
6. B. B. Borkar : *Tethe kara majhe julati*
7. Padma Gole : *Miandhara houni laple hote*

Essay **[15M/15P]**

Storywriting, Letterwriting (Commercial, Social and Personal), Speech writing of various occasions, Imaginary dialogues, etc. **[5M/5P]**

Grammar **[15M/10P]**

(Text-based knowlelge of Grammar is expected and should be of a standard higher than that acquired at the secondary stage).

1. Prayoga (Voices)
2. Vakya prithakkaran (Analysis)

History of Literature (1875-1950) **[15M/20P]**

The role of following authors to be studied

1. Keshavasuta
2. V. S. Khandekar
3. N. S. Phadke
4. P. K. Atre
5. B. R. Tambe

Rapid Reader (Any of the following) **[10M/5P]**

G.N. Dandekar : *Shitu*

C.V. Joshi : *Chimanravache Charhat.*

[M/P] - Number of Marks / Number of Periods

GUJARATI

CLASS XI

Full Marks—100

Prose	–	20
Poetry	–	20
Composition	–	10
Grammar	–	15
Gujrati Sahityano Itihaas	–	15
Medela Jeev	–	20
Total Marks		**100**

A. Gujarati Gadya Sangraha [20 M/22P]

1) Navalran—Natvara ane varghoda
2) Jyotindra Dave—Jibh
3) Gulabdas Broker—Evun Kor Kare
4) Ramanbhai Nilkanth—Aggadina Anubhav
5) Chadravadan Mehta—Ag-gadina Musafaro.

B. Gujarati Padya Sangraha [20M/22P]

1) Narmad—Kabirvad
2) Kalapi—Gramya-mata
3) Jayant Pathak—Revatate Madyahn Sandhya
4) Sundaram—Bano Photograph
5) Niranjan Bhagat—Ghadik Sang
6) Sri Ushnas—Dhanya Bhagya
7) Rajendra Shah—Shravani Madhyahn

C. Composition [10M/7P]

1) Sankshep
2) Arthavistar
3) Varta Rachana
4) Patra Rachara
5) Sambad Rachna

D. Vyakran (Grammar) [15M/16P]

1) Naam
2) Sarvanaam
3) Visheshan
4) Kriyapad
5) Kriyavisheshan
6) Prayog
7) Samas

E. Gujarati Sahityano Itihaas [15M/22P]

1) Narsinha Mehta
2) Meerabai
3) Akho
4) Premanand
5) Dayaram

F. Madela Jeev [20M/16P]

Pannalal Patel

[M/P] - NUMBER OF MARKS AND/ NUMBER OF PERIODS

CLASS XII

Full Marks—100

Prose	–	**20**
Poetry	–	**20**
Nibandh Rachana	–	**20**
Grammar	–	**10**
Sahityano Itihaas	–	**10**
Ajramar	–	**20**
Total Marks		**100**

A. Gujarati Gadya Sangraha [20M/22P]

1) Gandhiji—Chori ane Prayaschit
2) Kaka Kalelkar—Tajmahal
3) Kanaiyalal Munshi—Ushae Shun Joyun
4) Vishnuprasad Trivedi—Ramayana
5) Suresh Joshi—Janmotsav

B. Gujarati Padya Sangraha [20M/22P]

1) Narmad—Avsan Sandesh
2) Kant—Vasant Vijay
3) Umashankar Joshi—Bidma Saanjveda
4) Sundaram—Mere Piya
5) Nanalal—Harina Darshan
6) Balvantrai Thakore—Bhankara
7) Niranjan Bhagat—Adhunik Aranya

C. Nibandh Rachana [20M/10P]

D. Vyakran (Grammar) [10M/16P]

1) Shabdashakti
2) Alankar
3) Chhand
4) Ras-Vichar

E. Gujarati Sahityano Itihaas [10M/20P]

1) Narmad
2) Dalpat
3) Govardharam Tripathi
4) Balvantrai Thakore
5) Nanalal

F. Ajramar—Shivkumar Joshi [20M/20P]

[M/P] - Number of Marks / Number of Periods

PUNJABI

CLASS XI

Full marks – 100

Prose **[20 M/20P]**

Text-Book prescribed : Katha Sarover (Published by the Punjab University Publication bureau Chandigarh). Pieces prescribed are in the pages 1-94 of the book.

Pieces :

1. Bhabi Maina.
2. Arji.
3. Poonjidaar Mittar.
4. Roop Vadda ke Rab.
5. Baba Jaimal.

Poetry (classical) **[20 M/30P]**

Text-Book prescribed : Kav Ras (Published by the Punjab University Publication bureau Chandigarh). Pieces prescribed are in the pages 1-84 of the book.

1. Punjab de Lok Geet.
2. Shaikh Freed Shakarganj.
3. Guru Nanak Dev Ji.
4. Bhai Gurdas.
5. Guru Gobind Singh
6. Waris Shah.
7. Hashim.
8. Qadir Yar.
9. Shah Muhammad.

Drama (any one of the following) **[20 M/20P]**

1. Murde da Ration, by G.S. Khosla.
2. Bank, by Gurdial Singh Phul.

History of Literature **[20 M/15P]**

Book recommended : Dr. Piara Singh—Sahit Preichaya (Modern Period 1805 onwards.) Published by the Punjab University Publication bureau Chandigarh.

Precis, Substance, Summary, Amplification Story writing, Letter writing (Commercial, social and personal), Prepared speech for various occasions, Imaginary dialogue etc. **[20 M/15P]**

CLASS XII

Full marks – 100

Prose **[20 M/20P]**

Text-Book prescribed : Katha Sarover (Published by the Punjab University Publication bureau Chandigarh). Pieces prescribed are in the pages 95-154 of the book.

Pieces :

1. Ann Devta
2. Ikko Rasta.
3. Giddar Singi.
4. Toori the Pand.
5. Chhavian di Rutt.

Poetry (Modern Poetry) **[20 M/30P]**

Text-Book prescribed : Kav Ras (Published by the Punjab University Publication bureau Chandigarh). Pieces prescribed are in the pages 97 to 154 of the book.

1. Bhai Veer Singh.
2. Dhni Ram Chatric.
3. Prof. Puran Singh.
4. Gurmukh Singh Musafir.
5. Vidhata Singh Teer.
6. Amrita Pritam.

Rapid Reader (any one) **[20 M/20P]**

1. Pavittar Pappi : Nanak Singh
2. Param Manukh : Gurbakhsh Singh
3. Rana Surat Singh : Bhai Veer Singh

Essay **[20 M/10P]**

Grammar **[20 M/20P]**

(Grammar should be Text-based. Knowledge of Grammar is expected to be a standard higher than that of acquired at secondary stage). Vak Both, Gargaj Bole, Bahu Arthik Shabad, Muhavare te Akhan.

[M/P] - Number of Marks / Number of Periods

TIBETAN

CLASS XI

Full Marks - 100

Prose	–	30
Poetry	–	30
History of Literature	–	10
Grammar	–	15
Precis, Substance, Summary, Ampilification	–	15
Total Marks		100

Prose [30M/30P]

1. Bod-Mi-Hi-Mdun-Lam (Chapter- VI)— H.H. The Dalai Lama
2. Mili-Bkah-Bhum (Mzad-Pa Gnyis-Pa) by Mila-Raspa
3. Ri-Mo-Mkhen-Dang Shing-Bzo-Mkhen— Edited by G. Tharchin.
4. Rtsed-chas-Cnam-Grdu by S. Norboo.

Poetry [30M/30P]

1. So-Nam-Bya-Tshul ... Folk Song
2. Chos-Brgyad-Spong-Wi-Mgur by Mila-Raspa.
3. Hdod-Pei-Ghu-Dbyangs by H.H. The 6th Dalai Lama. (Tshangs-Dbyang-Rgya-Mtsho).

History of Literature [10M/10P]

Thon-Mi-Sambhota to Lo-Tsawa. Kinchen -Bzang-Po Books Recommended: Deb-Then-Sangon Po. by Lo-Tes-Ba-Jzon-Nu-Dpal

Grammar [15M/15P]

Text-based knowledge of grammar is expected to be of a standard higher than that acquired at Secondary stage. (Book Recommended : Ljon-Pe-Dwang-Po).

Amplification [15M/15P]

Precis, Substance, Summary and Amplification.

CLASS XII

Full Marks - 100

Prose	–	30
Poetry	–	30
Drama	–	10
Essay Story writing, Letter writing	–	15
Rapid Reader	–	15
Total Marks		100

Prose [30M/30P

1. Rlang-Hkhor-Khalopa by T. Tenzin
2. Dge-Hdun-chos-Hphel by R. Wangdhi

Poetry [30M/30P

1. Thon-Mi-Sam-Bhota-by N. Jimpa.
2. Ganges chen-Mzod-hunga by T. Tenzin.

Drama (Any one) [10M/10P

1. Las-Mtshams-Gchod-Pa by S.Norboo.
2. Mis-Rabs-Kyi-Bar khyad by Jinpa.

Essay [15M/15P

Story writing, Letter writing (Commercial, personal, prepared speech for various occasions and imaginary dialogue).

Rapid Reader [15M/15P

i Chos-Rgyal-Nor-Bzang... Edited by Cultural Press Dharmshala.

or

ii) Hgro-Ba-Bz-Bzangmo.

[M/P] - Number of Marks / Number of Periods

PHYSICS

CLASS XI

Full marks – 100

THEORY – 80

Mechanics & Properties of Matter-I [32M/32P]

i) Physical world and measurement [4M/4P]

Physics, Technology, Industry and Society. Units of measurement, systems of units, SI units, fundamental and derived units. Dimensions, checking of correctness of equation from the concept of dimensions.

ii) Particle dynamics [10M/10P]

Rest and Motion : Reference frame; displacement, velocity and acceleration: Momentum; kinematical equations (In one dimension); Velocity-time, position-time graphs, elementary problems.

Scalars and Vectors : vectors in three dimensions, composition and resolution of vectors, rectangular components in 2 and 3 dimensions, unit vector, representation of vector by coordinates, addition and subtraction of vectors by geometrical and analytical methods, commutative and associative properties of vector addition, multiplication of vectors, scalar and vector products (two vectors only), relative velocity and acceleration.

Projectile motion (inclined plane to be excluded).

Newton's laws of motion; inertial force; units of force; impulse and impulsive forces;

Conservation of linear momentum, elastic collision of particles moving in the same line, jets and rockets; Friction : static and kinetic friction, coeff. of friction

iii) Statics [3M/3P]

Centre of mass, centre of gravity, momentum conservation and centre of mass motion; conditions of equilibrium of a system of forces. Moment of a force about a point and about an axis; couple, torque.

iv) Work, Energy and Power [3M/3P]

Definition of work as a scalar product, relevant units, work done by and against a force, mechanical energy :- kinetic and potential. Conservation of energy — the case of a freely falling body. Conservative forces; conservation of mechanical energy (kinetic and potential energies), Potential, Non-conservative forces.

Mass-energy equivalence (qualitative idea only).

Power :- definition, units.

v) Elastic properties of matter [3M/3P]

Definitions, statements and explanation of the terms : stress, strain, elastic limit, Hooke's law, moduli of elasticity; Young's modulus, Bulk modulus, rigidity modulus, Poisson's ratio, principle of measurement of Y (no experimental details).

vi) Hydrostatics & Fluid Mechanics [9M/9P]

Density and specific gravity (methods of determination not required). Condition of Floatation from Archimedes' principle. Pressure of fluids, pressure in a liquid, unit of pressure. Transmission of fluid pressure. Pascal's law, principle of multiplication of force, Hydraulic Press (principle only and problem, no descriptive details) Air pressure and its measurement, Torricelli's and Fortin's barometer, siphon.

Surface energy and surface tension, Capilarity, Laminar and Turbulent flow, Coefficient of viscosity, Bernouli's Principle (no derivation) and its simple applications, Stokes' law and terminal velocity.

Heat and Thermodynamics-I **[12M/12P]**

i) **Temperature** [1M/1P]
Thermal equilibrium and temperature (Zeroth law of Thermodynamics)

ii) **Thermal Expansion** [4M/4P]
Thermal expansion of solids and liquids; simple demonstrations; coefficients of linear, superficial and cubical expansion of solids, their relations. Application of expansion of solids, (compensated pendulum and bimetallic strip only) real and apparent expansions of liquids, Relation between expansion coefficients, anomalous expansion of water, effect on marine life. Expansion of gas – volume and pressure co-efficient.

iii) **Calorimetry and change of state**[3M/3P]
Preliminary definitions; Principle of calorimetry (no questions on measurements to be set). Latent heat, brief discussion of determination, calorimetric problems. Effect of pressure on melting point and boiling point; Vapour pressure, Relative humidity. Difference between gas and vapour – critical temperature.

iv) **Transmission of heat** [4M/4P]
Conduction of heat, thermal conductivity, thermometric conductivity, convection of heat, radiation, radiation as a form of energy. Black body, Kirchhoff's law (statement only), Newton's Law of cooling, Greenhouse effect and global warming.

Vibrations **[6M/6P]**

Periodic motion : Oscillation and its characteristic, periodic time, frequency, amplitude, Simple Harmonic Motion, Relation between SHM and uniform circular motion. Differential equation of SHM and its solution. Displacement, velocity and acceleration in SHM. Energy in SHM; Time period, frequency, amplitude and phase. Graphical representation of SHM. Simple pendulum, time period of simple pendulum, Superposition of two SHMs of same frequency in the same direction (a) in phase and (b) in opposite phase. Graphical and analytical treatment. Free vibration, Damped vibration (qualitative discussion with example). Forced vibration; resonance.

Geometrical Optics **[16M/16P]**

i) **Reflection at curved surface** [2M/2P]
Definitions of centre of curvature, pole, principal axis, principal focus, aperture, focal length of a spherical mirror, Mathematical relations between u, v, f and r. Formula for magnification.

ii) **Refraction of light** [3M/3P]
Laws of refraction (statement, explanations with ray diagrams); definition of refractive index (relative and absolute); cases of refraction from denser to rarer and from rarer to denser media, real and apparent depth.
Total internal reflection, critical angle, relationship between refractive index and critical angle, Transmission of light through optical fibre-brief principle only.

iii) **Prism** [4M/4P]
Prism refracting surfaces, refracting angle, principal section, refraction through a prism, ray diagram showing deviation by a prism, $D = i_1 + i_2 - A$. Idea of minimum deviation (Dm), experimental and graphical only. Relation $m = \frac{\sin(A + D_m)/2}{\sin(A/2)}$ assuming that for minimum deviation $i_1 = i_2$; Thin prism, simple problems. Total reflecting prisms and its application in periscope. Dispersion – as a phenomenon of breaking up of a composite light into different wavelengths.

iv) **Thin lenses** [4M/4P]
Thin lenses – Their construction. Basic definition – principal axis, principal foci, ray diagrams, showing image formation; Deduction of the lens formula for both convex and concave lenses. (any sign convention may be used consistently)
Different cases of image formation for both types of lenses. Power of lenses, definition only, correct location of images for extended objects at different positions by ray tracing method. Lens maker's formula (statement only) – simple problems. Two thin lenses in contact.

v) **Optical instruments and human eye** [3M/3P]
Photographic Camera (elementary ideas), simple and compound microscopes. Astronomical telescope, binocular. (Simple construction as a combination of co-axial lenses and ray diagrams showing final image formation – no discussion on aberrations, resolving power etc (Deduction of formula for magnification not needed). Human eye (defects and remedies only).

Current Electricity-I [8M/8P]

i) **Secondary Cell** [2M/2P]
Distinction between primary and secondary cells. Lead acid accumulator : construction; its emf when fully charged. Ampere – hour.

ii) **Ohm's law and resistance** [6M/6P]
Flow of electric charges in a metallic conductor, drift velocity and mobility and their relation with electric current. Ohm's Law; volt, ampere and ohm; resistance, resistivity, factors on which resistance of a conductor depends, combination of resistance in series and parallel, equivalent resistance; shunt, internal resistance of cells, Kirchhoff's laws – illustration by simple applications. Wheatstone Bridge, relation between resistances of branches when the bridge is balanced. Its application to P.O. Box and metre bridge for the determination of unknown resistance. Potentiometer – principle and applications to measure potential difference and for comparing emf of two cells.

Modern Physics-I [6M/6P]

Atomic & Nuclear Physics [6M/6P]
Fundamental constituent of atoms and their properties, importance of number of protons in atom, principle constituents of nucleus, atomic number, isotopes, mass number. Radio activity : its discovery, alpha, beta and gamma rays and their principal properties. Radioactive decay law, graphical representation only without deduction, half-life and decay-constant. Radio isotopes, artificial transmutation of elements with simple illustration. Nuclear fission and fusion : chain reaction, nuclear reactor-principle of operation. Thermo nuclear fussion as the source of energy in sun and stars.

PRACTICAL– 20M

Theory, Model, Accuracy [12M]

1. To determine the volume of rectangular parallelopiped or a cylinder with the help of side callipers.
2. To determine the cross-section of a given wire by using a screw-gauge.
3. To determine the thickness of a given glass plate by using a spherometer.
4. To determine the volume and specific gravity of a given solid of irregular shape, heavier than and insoluble in water by hydro-static balance.
5. To determine the sp. gr. of a given liquid by Hare's Apparatus.
6. To determine the sp. Gr. of a given liquid by the sp. Gr. bottle.
7. To verify the laws of reflection of light by ray tracing with pins and to show that the object distance is equal to the

image distance. (At least three different rays are to be taken and rays to be traced with pins).

8. To verify the laws of refraction of light (at least three different rays are to be taken).
9. To determine the focal length of a concave mirror by the method of coincidence.
10. To verify Ohm's law using ammeter and voltmeter.
11. To verify Hooke's law by drawing load-elongation curve.

N.B. At least 8 experiments to be performed by each student.

Laboratory Note Book **[5M]**

Viva Voce **[3M]**

CLASS XII

Full Marks – 100

THEORY – 80M

Mechanics & Properties of Matter-II **[10M/10P]**

i) Dynamics of rotational motion[5M/5P]

Rotational motion of a particle; angular velocity, angular acceleration, relation between angular velocity and linear velocity.

Angular momentum, relation between angular acceleration and torque (statement only), Moment of inertia and its physical significance (Formulae of moment of inertia to be assumed for uniform bodies with simple geometrical shapes) radius of gyration (definition only). Rotational kinetic energy, conservation of angular momentum with some examples.

Centripetal force, centrifugal force (as a pseudo force).

ii) Gravitation **[5P]**

Newton's Law of Universal Gravitation (statement and mathematical relation). Constant of gravitation (definition and value with units, no experimental determination) Examples of gravitational attraction between heavenly bodies (e. g. the Sun and the Earth, the earth and the Moon) Gravitational attraction of the earth, relation between G and g. Variation of g. Gravitational potential energy near the surface of the earth, gravitational potential, escape velocity, Motion of planets and satellites, statement of Kepler's laws of planetary motion. Geostationary and polar satellites. Weightlessness in orbiting satellites.

Heat and Thermodynamics-II **[10M/10P]**

i) Thermodynamics **[5M/5P]**

Heat as a form of energy; relation between calorie and erg, First Law of Thermodynamics, Intensive and extensive thermodynamic variables. Isothermal and adiabatic expansion of gases (brief discussion), reversible and irreversible processes. Specific heats of gases, relation between c_p and c_v.

ii) Kinetic Theory of gases **[5M/5P]**

Evidence of molecular structure of matter and of random molecular motion. Brownian movement (qualitative discussion). Basic assumptions of kinetic theory of ideal gases. Mean, rms and most probable speed. Pressure of an ideal gas (simple derivation). Charle's law, Boyle's law, Avogadro's law and pressure law from kinetic theory of gases. Kinetic energy of molecules and absolute temperature; definition of mean free path

Waves and Physical Optics **[16M/16P]**

1) Waves **[11M/11P]**

Elastic waves – longitudinal and transverse; characteristics of propagating waves, nature of the medium, wavelength, amplitude of wave, time period, frequency, velocity of wave and their

relation. Properties of waves : Laws of reflection and refraction of waves with reference to sound wave. Periods–3

Sound wave : longitudinal elastic wave, velocity of sound wave, statement and explanation of Newton's formula and Laplace's correction. Dependence of velocity on temperature, pressure and humidity of air.

Superposition of waves – graphical and analytical representation : (i) two S.H. waves of nearly equal frequency and amplitude and moving in the same direction (beat) : determination of unknown frequency from beating frequency. (ii) Two S.H. waves of equal amplitude and frequency travelling in opposite directions (standing or stationary waves); characteristics of standing waves and comparison with progressive wave.

Transverse standing waves on stretched wire; laws of transverse vibration of strings, fundamental, harmonics.

Longitudinal standing waves in air column. (i) Vibration of air column in a tube closed at one end. Determination of velocity of sound or the frequency of a tuning fork by resonance with vibration of air column in a tube closed at one end. (ii) Vibration of an air column in a tube open at both ends.

Doppler Effect in sound propagation. (derivation not required)

ii) Physical Optics [5M/5P]

Wave front and Huygen's Principle; Reflection and refraction of plane wave at a plane surface using wave fronts (qualitative idea); Interference – Young's double slit experiment and expression for fringe width. Coherent sources.

Electrostatics [12M/12P]

i) Introduction [3M/3P]

Electricity from friction, two types of electricity, repulsion is a surer test of electrification, explanation of charging by rubbing in the light of electron theory. Conductor and insulator.

Dielectric polarisation – physical explanation.

Charge resides on the outer surface of a conductor – Electric screening. Effect of curvature on surface density of charge. Action of points – discharging action of points, spraying action of points, collecting action of points, lightning conductor.

ii) Electrostatic field & Electric potential [6M/6P]

Coulomb's law of force between two point charges; permittivity, e.s.u. and S.I. unit of charge, electric intensity; Electric field due to a point charge. Electric lines of force, properties of lines of force. Electric dipole, electric field due to a dipole and behaviour of a dipole in a uniform electric field.

Electric flux, statement of Gauss' Theorem and its application to find field due to uniformly charged infinitely long straight wire, thin spherical shell. Potential at a point in the electric field; Potential difference between two points; e.s.u. of potential, practical unit of potential, potential of a charged conductor, potential of the earth, relation between intensity and potential (qualitative).

iii) Capacitance and capacitors [3M/3P]

Capacitance of a conductor; factors affecting capacitance of conductor; capacitance of a spherical conductor, capacitors, parallel plate capacitors and capacitance, Unit of capacitance. Combination of capacitors in series and parallel. Types of capacitors. Van de Graff Generator.

Current Electricity-II [20M/20P]

i) Heating effect of current [4M/4P]

Joule's law, mechanical equivalent of heat and its determination by electrical method. Electrical energy, power, unit of power and energy (to be taught in S.I. units). Board of Trade unit of electrical energy.

Thermoelectricity, Seebeck and Peltier effect, thermo-emf, thermo current, thermocouple, thermo-emf depends on difference of temperature of the two junctions of a thermocouple and nature of the metals of the thermocouple.

ii) **Electromagnetism-I** **[8M/8P]**
Concept of magnetic field, Oersted's experiment, Biot Savart law, Magnetic field due to an infinitely long current carrying straight wire and a circular loop; Ampere's circuital law and its application to straight and toroidal solenoids; Force on a moving charge in uniform magnetic and electric fields. Cyclotron frequency, force on current carrying conductor in a uniform magnetic field. Forces between two parallel current-carrying conductors-definition of ampere. Torque experienced by a current loop in a uniform magnetic field, moving coil galvanometer – its current sensitivity and conversion to ammeter and voltmeter, current loop as a magnetic dipole and its magnetic dipole moment; Magnetic field intensity due to a magnetic dipole (bar magnet). Tangent galvanometer : Bar magnet as an equivalent solenoid, magnetic field lines. Molecular theory of magnetism; Magnetic premeability and susceptibility, Dia-, para- and ferromagnetic substances, examples. Terrestrial magnetism : Magnetic elements, Definitions, Declination, Dip and Horizontal component of the earth's magnetic field; their explanation (measurements not required).

iii) **Electromagnetism - II** **[4M/4P]**
Electromagnetic induction. Magnetic induction, magnetic flux, flux density. Faraday's laws of induction, induced emf; induced current; Lenz's law of electromagnetic induction and its justification from the principle of conservation of energy. Determination of the direction of induced current by Lenz's law, emf induced in a conductor moving in a magnetic field, Fleming's left-hand rule.

iv) **Alternating current** **[4M/4P]**
Idea of alternating current (qualitative discussion only) Peak and rms values of alternating current/voltage. Elementary principles of dynamo and D.C. motor.

Modern Physics-II **[12M/12P]**

i) **Electromagnetic waves** **[2M/2P]**
Electromagnetic waves and their characteristics (qualitative ideas only); transverse nature of electromagnetic waves. Electromagnetic spectrum (Radio, microwaves, infra-red, optical, ultraviolet, X-rays, -γ-rays).

ii) **Semiconductors & Electronics** **[5M/5P]**
Elementary idea of energy bands in solids; intrinsic, p and n-type semiconductors, p-n junction diode and its characteristics, its use as half-wave and full-wave rectifiers, pnp and npn transistors, their CE characteristics. Binary numbers – basic concepts. AND, OR, NOT gates

iii) **Quantum theory** **[5M/5P]**
Photoelectric phenomena, particle nature of radiation, Einstein's equation, threshold frequency, work function; energy and momentum of photon, photoelectric cell. Wave particle duality, de Broglie's hypothesis (qualitative idea only). Deduction of Bohr's formula and explanation of emission and absorption of radiation through electronic transition. X-ray emission, Moseley's law and atomic number.

PRACTICAL–20M

Theory, Model, Accuracy **[12M]**

1. To determine the sp. gr. of a body lighter than water by using hydrostatic balance.
2. To determine the sp. gr. of a granular solid insoluble in water with the help of a sp. gr. bottle.
3. To draw L-T^2 curve by determining time

periods with the help of a simple pendulum for at least five different lengths of oscillations and to verify the proportionality of L and T^2.

4. To verify Boyle's law for a gaseous material using five different pressures – atmospheric pressure, 2 pressures below and 2 pressures above the atmospheric pressure – by showing PV as constant.
5. To determine unknown frequency of a tuning fork by using a sonometer (mass per unit length of the sonometer to be supplied)
6. To determine the focal length of a given convex lens by u-v method using pins or screen and a luminous object (at least five diff. object distances should be used).
7. To trace magnetic lines of force due to a bar magnet when its north pole is pointing north.
8. To verify the laws of combination of two resistances (a) in series and (b) in parallel by using a P. O. Box.
9. To determine the value of an unknown resistance with the help of a meter bridge (Neglect end-correction).
10. To determine the value of the reduction factor of a single coil tangent galvanometer by using three known current (measured by an ammeter) and hence to determine the value of an unknown current corresponding to a given deflection of the galvanometer.
11. To determine the velocity of sound in air by resonance of air column by elimination of end correction (neglect correction due to moisture and temp).

N.B. At least 8 experiments to be performed by each student.

Laboratory Note Book	**5**
Viva Voce	**3**

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

CHEMISTRY

CLASS XI

Full Marks - 100

THEORY – 80M

Unit 1

Atoms, Molucules & Chemical Arithmetic [8M/8P]

Dalton's atomic theory (Critical study). Avogradro's Hypothesis. Application of Avogradro's Hypothesis and deduction of M=2D and molar volumes of ideal gases at STP. Avogardo Number.

Atomic mass, molecular mass, Equivalent weight (no experimental determination required), Valency. A=EV. Gram atomic weight, Gram molecular weight and Gram equivalent weight. Gay Lussac's Law of gaseous volume. Mole concept.

Weight-weight, weight-volume Calculations. Eudiometry.

Percentage composi-tion, empirical formula and molecular formula simple Numerical problems.

Unit – 2

Atomic Structure [6M/6P]

Concept of Nuclear Atom : electron, proton and neutron (charge and mass of), atomic number. Extra nuclear structure: Rutherford's model and its limitations.

Line spectra of hydrogen atom,

Qantization of energy (Planck's equation $E = h\nu$), Bohr's model of hydrogen atom and its limitations, Sommerfields modifications (elementary idea). The four quantum numbers: n, l, m and s, the *s, p, d* and f electrons, ground state electronic configurations of many electron atoms and mono atomic ions.

The Aufbau Principle, Pauli's Exclusion Principle and Hund's Rule.

The concept of atomic orbitals, shapes of s, and p orbitals (pictorial approach).

Unit – 3

Colloidal, solutions ; Electrolytic solutions & Chemical Equilibrium [10M/10P]

Colloidal Solutions : Differences from true solutions, hydrophobic and hydrophilic colloids (meaning, examples and uses), coagulation and peptization of colloids; dialysis and its applications, Brownian motion, Tyndall effect and its applications.

Electrolytic Solutions: Specific conductance, equivalent conductance and ionic conductance (definitions only), Kohlrausch's law (statement only). Faraday's laws of electrolysis and their applications, the Faraday (F), unit of charge–the electron ($e = F/N$), Numerical problems.

Chemical Equilibria: The Law of mass action, dynamic nature of chemical equilibria. equilibrium constants (K), Le Chatelier's Principle. Equilibrium constants of gaseous reactions (Kp and Kc) and relation between them (examples).

Unit–4

Gas Laws [6M/6P]

Gaseous state : Measurable properties of gases. Boyle's Law & Charles Law, absolute scale of temperature, kinetic theory of gases (postulates only), ideal gas equation: $PV = nRT$, $PV = (w/M)RT$;

Dalton's Law of partial pressure, Graham's Law of gaseous diffusion. Deviations from ideal behavior.

Liquefaction of gases, real gases, van der Waal's equation. (Numerical problems.)

Unit – 5

The Periodic Table & The Chemical Families: [8M/8P]

Modern periodic law (based on atomic number)

Modern periodic table based on electronic configurations, groups and periods. Types of elements representative (s-block and p-block) elements, transitional (d-block) elements and inner transitional (f-block) elements (lanthanides and actinides) and their general characteristics. Periodic trends in physical and chemical properties: atomic radii, valency, ease of ionization (elementary idea about ionization energy and electron affinity), electronegative metallic naure, acidic and basic natures of oxides and hydrides of the representative elements (up to Z = 20). Position of hydrogen and the noble gases in the periodic table, diagonal relationships:

Unit – 6

Chemical Bonding & Molecular Structure [10M/10P]

Valency electrons, the octet rule, Electrovalent and covalent bonds with examples, Properties of electrovalent and covalent compunds. Limitation of octet rule (examples).

Directionality of covalent bonds, shapes of poly atomic molecules(examples), Concept of hybridization of atomic orbitals (qualitative pictorial approach): sp^3, sp^2 and sp hybridizations with typical examples.

Tetrahedral space model of carbon atom, single-bond, double-bond and triple - bond involving carbon atom with examples, δ and π bonds.

Valence Shell Electron Pair Repulsion (VSEPR) concept (elementary idea)–shapes of H_2O, H_2S, CH_4, NH_3, CO_2, NO_2 and SO_2 molecules. Concept of resonance (elementary idea), resonance structures (examples). Elementary idea about electronegativity, bond polarity and dipole moment (Inter & intra molecular Hydrogen bonding and its effects on physical properties (MP, BP and solubility).

Double salts and complex salts and co-ordination compounds (examples only) co-ordination number (examples with co-ordination number 4 and 6 only)

Unit – 7

Chemistry of Non-Metallic Elements & Their Compounds. [10M/10P]

Carbon: Occurrence, isotopes, CO & CO_2 : production, properties and uses.

Nitrogen & Phosphorus : Occurrence, Isotopes, isolation from natural sources and purification, reactivity of the free elements. Preparation, properties, reactions of NH_3 and PH_3, N_2O and NO and NO_2; HNO_3; P_4O_6 and P_4O_{10}, H_3PO_3 and H_3PO_4.

Oxygen and Sulfur : Occurrence, isotopes, allotropic forms, isolation from natural sources and purification, properties and reactions of the free elements. Water. unusual properties of water, heavy water (production and uses). Hydrogen Peroxide and Ozone(production, purification, properties, reactions and uses). H_2S, SO_2 and H_2SO_4 (preparation properties reactions and uses)

Unit–8

Chemistry of Organic Compounds (I) [8M/8P]

Aliphatic Compounds : Hydro-carbons, Compounds: Unique nature of the carbon atom – catenation. Classi-fication of organic compounds, homologous series of compounds up to C_4 (open chain) and their IUPAC and trivial names, Structural isomerism.

Detection of special elements (N, Cl, Br, I and S) in organic compounds by chemical tests. Elementary principles of estimation of C, H and N in organic compounds. Determination of molecular masses of organic compunds (principles of silver salt method, chloroplatinate method, Victor Mayer's method

and elementary idea about mass spectrometry). Problems on empirical formulae and molecular formulae.

Hydrocarbons : Petroleum as the industrial source of hydrocarbons. Alkanes: methane and ethane. Alkene : ethylene, propene, Alkyne : acetylene – [preparation, large scale production, properties and reactions (including the application of Markownikoff's rule where applicable) and technical uses].

Unit–9

Chemistry in Industry : [10M/10P]

Large scale production (including physicochemical principles where applicable omitting technical details and uses of individual items)

(i) Heavy chemicals: Sulfuric acid (contact process), Ammonia (Haber's process), Nitric acid (Ostawald's process), sodium bi-carbonate and sodium carbonate (Solvey process).

(ii) Polymers, Polythene, Nylon 66, rubber from natural source including vulcanisation.

(iii) Electrochemicals: Sodium hydroxide, hydrogen, chlorine, bleaching powder as by product.

(iv) Fuel Gases: Coal gas, producer gas, water gas, LPG.

(v) Fertilizer : Urea, ammonium sulfate, super phosphate of lime.

(vi) Ceramics : Port-Land cement and glass.

Unit–10

Environmental Chemistry : [4M/4P]

Chemical nature of air, water & soil and their role in environment. Common modes of pollution of air, water and soil. Importance of Ozone layer. Important chemical interactions, reactions. Green House effect, Smog. Pollution of water by domestic and industrial effluents. Pollution degradation of soil – Pesticides fertilizers.

PRACTICAL – 20M

Unit –11

Basic Laboratory Techniques & Investigatory Projects [10M/10P]

Marks Distribution

(to be internally evaluated by continuous assessment)

1) Basic Laboratory Techniques	:	3M
2) Investigatory Projects	:	3M
3) Viva-Voce	:	2M
4) Laboratory Records	:	2M
Total	:	10M

1. Basic Laboratory Techniques (All Compulsory) :

(i) Acquaintance with Bunsen burner / spirit lamp / LPG burner etc.

(ii) Bending of glass tube, glass rod, making jet etc.

(iii) Boring cork and fitting up of wash bottle.

(iv) Acquaintance with chemical balance and weight box (setting up of balance, labeling and weighing).

(v) Filtration and crystallization.

2. Investigatory Projects (At least three to be performed):

(i) Crystallization of sucrose / copper sulfate.

(ii) Study of rusting of iron: To study the increase of weight due to rusting of known weight of iron in moist air

(iii) Study of hydration of anhydrous salts (Na_2CO_3 / Na_2SO_4) : To study the increase in weight due to hydration in moist air.

(iv) Study of sublimation of camphor : To study the loss in weight due to sublimation in air.

(v) Study of heat of reaction : To study the rise or fall of temperature due to :

a) Dilution of conc. H_2SO_4 with water (addition of different volumes conc. H_2SO_4 to fixed volume of water).

b) Neutralization of strong acid (HCl) with strong base (NaOH)

c) Dissolution of KNO_3 / $NaNO_3$ / NH_4Cl in water.

(vi) Preparation of hydrophilc sol (starch / egg / albumin) and hydrophobic sol (hydrated aluminum oxide / hydrated ferric oxide). their dialysis and comparison of precipitation values of NaCl, $(NH_4)_2 SO_4$, $BaCl_2$.

(vii) Study of dialysis of different samples of waste water and identification of different ions in the resulting solution by chemical tests (may be done during class-XII)

(viii) Construction of Voltic cell / Daniel cell and measurement of e.m.f. using voltmeter of high internal resistance.

(ix) Study of variation of e. m. f. of Zn / Zn^{2+}IICu^{2+}ICu cell with change of concentration of electrolyte ($ZnSO_4$ / $CuSO_4$) at room temperature.

(x) Determination of pH of dilute solutions of acids and bases, buffer solutions and fruit juices using universal indicator paper / solution.

(xi) Determination of doses of bleaching powder required to disinfect samples of water from different sources.

(xii) Study of setting of mixtures of cement with lime, sand of different qualities. rice husk etc. with respect to time, volume and strength.

Unit – 12

Qualitative Chemical Analysis [10M/10P]

1. Detection of Acid and Basic Radicals by dry and wet tests (one acid radical and one basic radical from same or different samples soluble in water) from among : (4M)
   (a) Acid Radicals : Cl^-, S^{2-}, SO_4^{2-}, NO_3^-, CO_3^{2-}
   (b) Basic Radicals: Cu^{2+}, Al^{3+}, Fe^{3+}, Fe^{2+}, Zn^{2+}, Ca^{2+}, Mg^{2+}, Na^+, NH_4^+
2. Detection of Functional Groups (one functional group) in solid compounds from among: $-NH_2$ (aromatic) by characteristic tests (carbylamine test not to be performed), -OH (phenolic), -CHO / >C=O & –COOH (2M)
3. Viva-Voce (2M)
   (to be internally evaluated by continuous assessment)
4. Laboratory Records (2M)
   (to be internally evaluated by continuous assessment)

CLASS XII

Full Marks - 100

THEORY - 80M

Unit 1

Radioactivity [5M/5P]

i) **Natural Radioactivity :** alfa beta and gama-rays and their properties. Rate of radioactive decay, decay constant and half-life period of radio elements. Numerical problems.

ii) **Stability of the atomic nucleus** : Effect of neutron proton (n/p) ratio on the modes of decay, group displacement law, radioisotopes and their uses ($^{14}_{6}C$, $^{32}_{15}P$, $^{60}_{27}Co$ and $^{131}_{53}I$ as examples) isobars and isotones (definition examples only), elementary idea about nuclear fission and fusion reactions.

Unit – 2

Chemical Energetics & Chemical Dynamics [14M/14P]

i) **Chemical Energetics :** Energy changes in physical and chemical transformations. Internal energy change (ΔE) and Enthalpy Change (ΔH) in a chemical reaction. Hess's Law and its applications. Numerical problems.

The Law of conservation of energy. The first law of thermodynamics. (Spontaneity of a chemical reaction. The Second law of

thermodynamics,) no numerical problems, Elementary idea about Entropy change (ΔS) and Free Energy Change (ΔG), significance of the relation : $\Delta G = \Delta H - T\Delta S$ (without derivation) examples with gaseous reactions. Numerical problems.

ii) Chemical Dynamics : Dependence of reaction rates with concentration, pressure, temperature, catalyst, size of particles etc. concept of energy barrier and activation energy (qualitative non-mathematical approach).

Order and molecularity of reactions (determination excluded). First order reactions specific rate constant, half-life period. Numerical problems, examples of first order and second order reactions.

Unit – 3

Chemistry of Solutions [5M/5P]

Non-Electolytes

Non-Electrolytic Solutions : Types of solution, vapour pressure of solutions of solids in liquids and Rault's Law of relative lowering of vapour pressure, colligative properties: osmotic pressure, depression of freezing points and elevation of boiling points of solutions & their relationships with molecular masses of solutes and solvents (without derivations) Numerical problems.

Unit –4

Acid-Base, Solubility & Redox Equilibria. [8M/8P]

i) Acid-Base & Solubility Equilibria: Ionization of weak electrolytes, Ostwald's dilution law.

Ionization constants of weak acids and bases, ionic product of water, the pH – Scale, pH of aqueous solutions of acids and bases, elementary idea about buffer solutions and buffer action (examples only).

Stoichiometry of acid-base reactions, acid-base titrations, acid-base indicators (structures non evaluative).

Solubility and Solubility Products.

Common ion effect (examples) (No numerical problems)

ii) Redox Equilibria: Oxidation-Reduction reactions as electron transfer processes, oxidation numbers, balancing chemical equations of redox reactions by oxidation number and ion-electron methods.

Standard electrode protentails ($E°$)

Electrode potential series, feasibility of a redox reaction.

Significance of Gibb's equation:

$\Delta G° = -nF\Delta E°$ (without derivation). (No Numerical Problems)

Stoichiometry of redox reactions, redox titrations (examples). (Numerical problems.)

Unit –5

Chemistry of non metals : Halogen [5M/5P]

Comparative study of the halogen family : Occurrence, physical states and chemical reactivities of the free elements, peculiarities of fluorine and iodine; hydracid of halogens (preparation, properties, reactions and uses) inter-halogen compounds (examples).

Unit – 6

Chemistry of metals [10M/10P]

i) General principles of metallurgy : Occurrence, concentration of ores, production and purification of metals, Mineral wealth of India.

ii) Typical Members : Occurrence, extraction, purification (where applicable), properties and reactions with air, water, acids, non-metals in respect of following metals : Na, Ca, Al, Fe, Cu and Zn.

Manufacture of steels and alloy steel (Bessemer, Open Hearth and L. D. process).

Principles of chemistry involved in electroplating, anodizing, galvanizing.

Unit –7

Chemistry of Organic Compounds (1) [7M/8P]

i) Halohydrocarbons : General methods of preparation, general properties of haloalkanes, haloform reaction, chloroform & iodoform (preparation, properties and uses).

ii) Organometallic Compounds : Preparation of Grignard's reagents and their synthetic applications for the preparation of alcohols, aldehydes, ketones, acids and amines.

iii) Aliphatic Compounds with functional groups : General methods of preparation, large scale production, properties, reactions, uses of individual compounds included in the syllabus and problems based on stoichiometry, structure, physical and chemical properties, reactions of functional groups :

iv) Alcohols : methanol and ethanol (from fermentation)

v) Ether : diethyl ether

Unit – 8

Chemistry of Organic Compounds (2) [10M/8P]

i) Aliphatic Compounds with Functional Groups : General methods of preparation, large scale production, properties, reactions, uses of individual compounds included in the syllabus and problems based on stoichiometry, structure, physical and chemical properties, reactions of functional groups :

ii) Aldehydes & Ketones : Formaldehyde, acetaldehyde, and acetone.

iii) Carboxylic acids & their derivatives: formic acid, acetic acid, and oxalic acid; acetyl chloride, acetic anhydride and acetamide.

iv) Ester : ethyl acetate.

Nitro compounds, Amines, Cyanides and Isocyanides :

Unit – 9

Chemistry of Organic Compounds (3) [10M/8P]

Benzene and its derivatives : Coal tar distillation and isolation of benzene. Substitution reactions (Chlorination, nitration, sulfonation and Friedel – Craft reaction) on benzene derivatives, directive influence of substitutions (examples).

Preparation, properties, reactions and uses of chlorobenzene, nitrobenzene, aniline, phenol, benzaldehyde, benzoic acid, salicylic acid, anthranilic acid.

Preparation, reaction, and synthetic applications of benzenediazonium chloride. Toluene and its *0, m, p* substituted derivaties and their side chain oxidations.

Problems based on stoichiometry, physical and chemical properties, structure and reactions of functional groups.

Unit–10

Application Oriented Chemistry and introduction to Biomolecules [6M/7P]

Application Oriented Chemistry :

(i) Main ingredients, their chemical natures (structures not required) and their side effects if any of common antiseptics, analgesics, antacids, pain killers, vitamin C.

(ii) Technical / Domestic / Medicinal uses of Chemicals : Baking powder, plaster of paris, calcium lactate, common alum, boric acid, borax, copper sulfate, epsom salt, oil of winter green, carbolic acid.

Introduction to Bio-molecule :

(i) Carbohydrates : Pentoses & Hexoses Distinctive chemical reactions of glucose.

(ii) Amino Acids : glycine, alanine, aspartic acid, cysteine (structure). Zwitterrion structures of amino acids peptides bond. ADP & ATP : sructures and role in bioenergetics, Nucleic acids – DNA & RNA skeleton structures.

PRACTICAL– 20M

Unit – 11

Quantitative Chemical Analysis [10M/10P]

Marks Distribution

(to be internally evaluated by continuous assessment)

1. Titrimetric Estimations : [6M]
   a) Acid – Base Titrations
   b) Redox Titrations

1 (a): Acid-Base Titrations (at least two be performed):

(i) Preparation of standard (N/10) oxalic acid solution and determination of strength of (N/10) sodium hydroxide solution.

(ii) Determination of strength of (a) (~N/10) HCl solution, (b) (~N/10) acetic acid solution by titration with standard (N/10) NaOH solution (supplied).

(iii) Preparation of standard (N/10) sodium carbonate solution and determination of strength of (~N/10) HCl solution.

(iv) Determination of acid content of lemon juice by titration with standared (N/10) NaOH solution (supplied).

1(b) : Redox Titrations (at least two to be performed) :

(i) Preparation of standard (N/10) oxalic acid solution and determination of strength of (~N/10) $KMnO_4$ solution.

(ii) Determination of strength of Fe^{2+} solution (Mohr's salt) by titration with standard (N/10) $KMnO_4$ solution (supplied)

(iii) Determination of strength of H_2O_2 solution by titration with standard (N/10) $KMnO_4$ solution (supplied)

(iv) Determination of strength of "hypo" solution (sodium thiosulfate, $Na_2S_2O_3$ $5H_2O$) by titration against standard (N/10) iodine solution (supplied) using starch indicator.

2. Viva-Voce [2M]
(to be internally evaluated by continuous assessment)

3. Laboratory Records [2M]
(to be internally evaluated by continuous assessment)

*** Demonstrations: Preparation of standard (N/10) solutions of oxalic acid / sodium carbonate.**

Unit – 12

Identification of Pure Compounds [10M/12P]

1. Identification of single solid / liquid pure compond (inorganic / organic) by Chemical tests. [6M]

   a) Solids:
   NaCl, NH_4Cl, $(NH_4)_2 SO_4$, Na_2CO_3, boric acid, borax, urea, glucose, sucrose, common alum.

   b) Liquids:
   HCl, HNO_3, H_2SO_4, H_2O_2, formic acid, acetic acid (cacodyl oxide test not to be performed), methanol, ethoanol, acetone, glycerol.

2. Viva-Voce [2M]
(to be internally evaluated by continuous assessment)

3. Laboratory Records [2M]
(to be internally evaluated by continuous assessment)

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

MATHEMATICS

CLASS XI

Full Marks—100

ALGEBRA
[30 Marks/30 Periods]

Surds and Indices

Fundamental laws of Surds and Indices, simple applications.

Arithmetic Progression : (A. P.)

Definition of A. P., Common difference, General term, Summation of first n terms. Sum of first n-natural numbers, A. M.

Geometric progression : (G. P.)

Definition of G P., Common ratio, General term, Summation of first n-terms, G. M.

Logarithms

Definition, General properties of logarithms.

Complex numbers

Complex numbers in the form a+ib, Real and imaginary parts of a complex number, Geometrical representation of complex numbers, Complex Conjugate, Modulus and Arguments of a complex number, Algebra of complex numbers (fundamental operations). Triangle inequality $|Z_1+Z_2|\le|Z_1+Z_2|$ and also $|Z_1 Z_2| = |Z_1||Z_2|$. Cube roots of unity and their properties.

Theory of Quadratic Equations

Quadratic equations with real co-efficients. Fundamental theorem of Algebra (Statement only). Roots, relations between roots and co-efficients of a quadratic equation, Nature of roots, formation of quadratic equation, common root. Sign and magnitude of the quadratic expression ax^2+bx+c (a, b, c are rational numbers).

Permutation and Combination

Definition of Permutation. Permutation of n different things taken $r(\le n)$ at a time; Permutation of n things, not all different; Permutation with repetitions (circular permutation excluded).

Definition of Combination; Combination of n different things taken r at a time; Combination of n things when things are not all different; Basic properties.

TRIGONOMETRY
[25 Marks/25 Periods]

The associated angles :

θ(+ve or − ve), $90^\circ \pm\theta$, $180^\circ \pm\theta$, $270^\circ \pm\theta$, $360''\pm\theta$.

The Trigonometrical ratios of compound angles

Sum and difference formula for sin (A ± B), cos (A ± B) etc.

Sum and difference as products.

(A, B, A ± B are all acute angles)

Multiple and submultiple angles

Simple problems; Finding the values of sine, cosine and tangent of the angle θ where $\theta = 15^\circ, 18^\circ, 36^\circ, 72^\circ$.

General solutions of Trigonometrical equations.

$\sin\theta = 0$, $\cos\theta = 0$, $\tan\theta = 0$

$\sin^2\theta=\sin^2\alpha$, $\cos^2\theta = \cos^2\alpha$, $\tan^2\theta=\tan^2\alpha$

Trigonometrical inverses

(Specific mention of principal values.)

Properties of triangles

Basic relations between sides, angles, circum radius. Area of triangles of the form $\frac{1}{2}$bc sin A. Simple and direct applications.

CO-ORDINATE GEOMETRY OF TWO DIMENSIONS
[14 Marks/14 Periods]

(All discussions should be made in terms of rectangular Cartesian co-ordinate system)

Basic Ideas

Distance formula, Section formula, Area of a triangle, condition of collinearity of three points in a plane.

Polar coordinates; Transformation from Cartesian to polar co-ordinates and vice-versa.

Parallel transformation of Axes.

Concept of locus. Elementary locus problems.

Equations of straight lines

Slope of a line. Slope in terms of co-ordinates of two points on it. Equations of co-ordinate axes, equation of lines parallel to co-ordinate axes, slope – intercept form, gradient / slope form, equation of the line through two given points, intercept form, symmetric form, normal form; Every first degree equation in x and y represents a straight line.

Angle between two lines; conditions of perpendicularity and parallelism of two lines; Equation of a line parallel to a given line. Equation of a line perpendicular to a given line. Distance of a point from a straight line.

Equations of Circles

Standard equation $x^2+y^2=a^2$. Equation of a circle with a given centre and radius. Equation of the form $x^2+y^2+2gx+2fy+c=0$ represents a circle. Equation of a circle in terms of the co-ordinates of the end points of a diameter. Parametric equation of a circle.

SETS, RELATIONS AND MAPPINGS
[10 Marks/10 Periods]

Idea of Sets, Finite and infinite sets, Empty set, universal set, subsets, Power set, Venn diagram, Complement of a set, operation on sets (Union, intersection, difference of two sets, De-Morgan laws) Inclusion / Exclusion formula for two or three finite sets. Cartesian product of sets.

Idea of relations, mappings, range and domain, injective, surjective and bijective mapping, Composition of mappings, Inverse of a mapping.

DIFFERENTIAL CALCULUS
[15 Marks/15 Periods)

Idea of number system :

Integer, Rational, Irrational and real number.

Variables and functions

Variables, Functions of single variable, Geometrical representations of functions of the form :

$ax + b(a, b \text{ rational})$, $\sqrt{x}$ (x > 0), $\frac{1}{x}(x\neq0)$,

$|x|$, $\frac{|x|}{x}$, $(x\neq0)$, x^2, sinx, cosx, tanx.

Idea of rational functions; Idea of exponential and logarithmic functions. Increasing and Decreasing functions, odd and even functions.

Limit and Continuity

Idea of Limit of a function with more stress on geometrical and intuitive approach. Algebra of limits (Statement only, no proof), $\lim_{x \to a} x^n$ (n, a positive or negative integer ($a \neq 0$) (statement only) proof of $\lim_{x \to a} \frac{(x^n - a^n)}{(x-a)} = na^{n-1}$, where n is a positive integer. Use of the limits (without proof) $\lim_{x \to o} \frac{\sin x}{x}$, $\lim_{x \to o} \frac{e^x - 1}{x}$, $\lim_{x \to o} \frac{\log(1+x)}{x}$, $\lim_{x \to a} \frac{x^n - a^n}{x - a}$

(n = rational number)limit of a function of a function (statement only). Simple applications of the above limits. Idea of continuity of a function at a point. (Geometric and intuitive approach), simple applications.

Derivative / Differential co-efficients of functions

Derivative of a constant function, x^n (n-rational), $\sin x$, $\cos x$, e^x, $\log x$ from first principle. Working rule of derivative of x^n (n is a real number); Rules of differentiation of sum, product and quotient of two functions (Statement only). Differential co-efficients of $\tan x$, $\cot x$, $\sec x$, $\operatorname{cosec} x$, $\sin^{-1} x$, $\cos^{-1} x$ $\tan^{-1} x$, $\operatorname{cosec}^{-1} x$, $\sec^{-1} x$, $\cot^{-1} x$.

VECTOR
[6 Marks/6 Periods]

Vectors and scalars. Equal vectors, Unit vector, Zero vector, Position Vector of a point in terms of i and j, Localized and free vectors, Collinear vectors, Negative of a vector, Components of a vector; Addition of vectors, Multiplication of a vector by a scalar. Position vector of a point dividing a line segment in a given ratio. Application of vectors in geometry (Simple geometrical problems).

CLASS XII

Full Marks—100

ALGEBRA
[20 Marks/20 Periods]

Probability :

Concept of Random experiments and their outcomes sample space. Events, certain and uncertain events. Equally likely outcomes. Classical definition of probability, addition rule, multiplication rule. (Venn diagram may be used).

Principle of Mathematical Induction :

Statement of the principle. Proof for the sum of squares, sum of cubes of first n natural numbers, divisibility properties like $2^{2n}-1$ divisible by 3, $n \geq 1$, 7 divides $3^{2n+1}+2^{n+2}$, $n \geq 1$.

Binomial theorem for positive integral index :

Statement of the theorem, proof by method of induction, general term, number of terms, middle term, equidistant terms.

Infinite Series :

Binomial theorem for negative integral and fractional index; exponential, logarithmic series, infinite G.P. series with ranges of validity (statement only). Simple application of the series. (Expansion of the series should be insisted upon.)

Matrices and Determinants

Concept of $m \times n (m\leq3, n\leq3)$ real matrix. Types of matrices. Operations of addition, Scalar multiplication and multiplication of matrices, Inverse of 2×2 matrices.

Determinant of an $n \times n (n\leq3)$ matrix. Statement of the properties of determinant only.

Minors and Co-factors. Application of determinant in (i) finding area of a triangle (ii) Solving a system of linear equation (not more than three variables) by Cramer's rule.

CO-ORDINATE GEOMETRY OF TWO DIMENSIONS
[11 Marks/11 Periods]

Conics

Definition of Conics (Parabola, Ellipse, Hyperbola) given focus and directrix, eccentricity. Classification of standard Conics (Parabola, Ellipse, Hyperbola) in terms of eccentricity.

Parabola

Standard equation, Reduction of the form $x = ay^2+by + c$ or $y=ax^2+bx+c$ to the standard form $y^2=4ax$ or $x^2=4ay$ respectively; elementary properties and parametric equation of parabola.

Ellipse and Hyperbola :

Standard equations only. Conjugate Hyperbola. Elementary properties. parametric equations.

DIFFERENTIAL CALCULUS
[10 Marks/10 Periods)

Derivative/Differential Co-efficients of functions :

Differentiation of a function. Implicit functions (statement only) – their derivatives. Differentiation of functions in parametric form.

Logarithmic differentiation. Second order derivative of a function.

INTEGRAL CALCULUS
[25 Marks/25 Periods]

Indefinite Integral :

Integration as the inverse of differentiation. Primitive, integrals of $x^m (m\neq-1)$, sin mx, cos mx, sec mx, cosec mx, tan mx, cot mx. $(m \neq o)\, e^{mx}$, 1/x, (Assuming the functions and primitives are defined). Integral of the sum of two functions. Integration by simple substitutions; standard integrals of the form $\int \frac{dx}{x^2 \pm a^2}$ $\int \frac{dx}{\sqrt{x^2 \pm a^2}}$ $\int \frac{dx}{\sqrt{a^2-x^2}}$ $\int \frac{dx}{ax^2+bx+c}$, $\int \frac{(px+q)dx}{ax^2+bx+c}$; direct application.

Integration by parts

Rule of integration by parts. Application in simple cases.

Standard integrals of the form : $\int \sqrt{x^2 \pm a^2}\, dx$, $\int \sqrt{a^2-x^2}\, dx$, $\int e^{ax} \sin bx dx$, $\int e^{ax} \cos bx dx$, $\int \sqrt{(ax^2+bx+c)}\, dx$, $\int (px+q) \sqrt{ax^2+bx+c}\, dx$, $\int \frac{dx}{a+b\cos x}$, $\int \frac{dx}{a+b\sin x}$.

Integration of rational algebraic functions by partial fractions of the form $\int \frac{dx}{(x-a)^m (x-b)^n}$ where m, n are positive integers and $m\leq2$, $n\leq2$.

Definite Integral

Definite Integral as the limit of a sum, Definite integrals of x, x^2 and of a constant, from above definition. Fundamental theorem of Integral Calculus (statement only). Applications in simple cases. Properties of definite integral $\int_a^b f(x)dx = \int_a^b f(z)dz$; $\int_a^b f(x)dx = -\int_b^a f(x)dx$; $\int_a^b f(x)dx = \int_a^c f(x)dx + \int_c^b f(x)dx$ (a<c<b) where c is a point between a and b.

$\int_0^a f(x)dx = \int_0^a f(a-x)dx$, Applications to odd and even functions.

DIFFERENTIAL EQUATIONS
[10 Marks/10 Periods]

Formation, order and degree of differential equations. Solution of first order and first degree differential equation of the form $\frac{dy}{dx} = f(x) \times g(y)$, $\frac{dy}{dx} = \frac{ax+by}{cx+dy}$ and of the form $\frac{d^2y}{dx^2} = f(x)$. use of initial conditions.

APPLICATION OF CALCULUS
[24 Marks/24 Periods]

Tangent and Normal :

Geometric interpretation of differential co-efficients. Slope of a tangent. Equations of tangent and normal to curves of the form $y = f(x)$ at the point (x_1, y_1) and application to circle, parabola, ellipse, hyperbola. Condition that the st. line y = mx + c may be a tangent / normal to a circle or to a curve.

Differential co-efficient as rate measurer.

Maxima and Minima :

Idea of Maxima and Minima of $y = f(x)$ at a point where $\frac{d^2y}{dx^2} \neq 0$ (statement only) Application to algebraic functions, $\sin x$, $\cos x$.

Determination of areas in simple cases

Interpretation of a definite integral as an area. Calculation of areas bounded by circle, parabola and ellipse, ordinate and abscissa as the case may be. (sketch of the area is needed).

Expression for velocity and acceleration

Expression for velocity and acceleration of a particle in terms of derivatives, velocity $= \frac{ds}{dt}$, acceleration $= \frac{dv}{dt}, \frac{d^2s}{dt^2}, v\frac{dv}{ds}$; where s represents the displacement.

With the above expression for velocity and acceleration to establish the formula s = vt (v constant velocity), $v = u + ft$, $s = ut + \frac{1}{2}ft^2$, $v^2 = u^2 + 2fs$. Simple applications.

Vertical motion under gravity.

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

BIOLOGICAL SCIENCE

CLASS XI

Full Marks - 100

Theory - 80M

1. Nature and Scope of Biological Sciences [2M/2P]

1.1 Status of Biology
1.2 Science of Life
1.3 Biology in ancient period (Mention Charak, Susruta, Aristotle, Darwin)
1.4 Scope of Biology
1.5 Importance of Biological Sciences in this millennium.

2. Unit of Life [6M/10P]

2.1 Tools and Techniques [Microscopes – Simple and Compound with diagram, EM (Brief idea)]
2.2 Cell Fractionations and Tracer Techniques (Principle and use of ^{32}P, ^{14}C)
2.3 Cell as the basic unit of life
2.4 Discovery of cell
2.5 Cell Theory
2.6 Ultrastructural components of the cell wall, Plasma Membrane, Plastid, Endoplasmic Reticulum, Golgi Bodies, Mitochondria, Ribosomes, Lysosomes, Nucleus, Centrosomes, Microbodies, Microtubules, Cyto-skeleton, Cilia and Flagella.

3. Cell Function [6M/4P]

3.1 Diffusion – Definition and Factors
3.2 Osmosis – Types, Membranes, Plasmolysis and Deplasmolysis
3.3 Absorption – Active and Passive transport with Mechanism.
3.4 Osmoregulation in freshwater and marine animals.

4. Enzymes [4M/2P]

4.1 Definition and Properties
4.2 Types with examples
4.3 Mechanism of Action (Lock and Key; Allosterism; Regulation of Enzyme action).

5. Chromosome [8M/10P]

5.1 Morphology of Chromosomes
5.2 Parallelism between gene and chromosome
5.3 Chemical Properties – Types of Nucleic Acids and differences
5.4 Physical structure of DNA-Watson and Crick Model. Replication of DNA (Brief Idea)
5.5 Types of RNA (mRNA, tRNA, rRNA) Mode of transcription (Brief idea)
5.6 Nucleic Acid as the genetic material (Experiments on bacterial transformation and viral transduction)
5.7 Definition of Euchromatin and Heterochromatin and differences; Brief idea of Polytene and Lampbrush chromosomes.

6. Cell Division [6M/2P]

6.1 Cell cycle and phases (control mechanism excluded)
6.2 Important characters of malignant cell
6.3 Process and significance of meiosis (with diagram).

7. Genetics [8M/7P]

7.1 Laws of Heredity (Mendel's Laws of Heredity)
7.2 i) Backcross, Test cross, Incomplete dominance, Multiple Gene, Linkage, Crossing Over
ii) Sex-linked inheritance–Colour blindness, Haemophila

7.3 Mutation – Definition and types; Importance of mutation

7.4 Gene structure and function. Mechanism of protein synthesis (Brief idea)
Genetic code.

8. Respiration **[8M/5P]**

8.1 Mechanism of glycolysis, Krebs' cycle (Flow chart only, no enzyme but ATP, H_2O and CO_2 calculation)

8.2 Outline idea of Electron Transport System

8.3 Relationship of photosynthesis and respiration

8.4 Applications of Fermentation.

9. Taxonony **[6M/8P]**

9.1 Definition, Importance, Relations of taxonomy with the classification of plant Kingdom

9.2 Rules of Binomial Nomenclature

9.3 Hierarchy and Key, types of classification

9.4 Classificationof plant kingdom. Salient features of different groups (Algae, Fungi, Bryophyta, Pteridophyta, Gymnosperm, Angiosperm, (monocot and dicot) with examples of economically important plants of major groups.) Some economically important plants (Mention uses and edible parts only):
Algae – *Spirulina*
Fungi – Mushroom
Bryophyta – *Sphagnum*
Pteridophyta – *Marsilea*
Gymnosperm – Pine
Angiosperm – Monocot - Bamboo; Dicot - Jute or Lemon

9.5 Life Cycle (in word diagram) with special reference to Alternation of Generations – Definition and Types. (Comment : **Five** salient features of each group. Figures of at least two specimen from each group).

10. Origin and Evolution of Life **[4M/4P]**

10.1 Haldane and Oparin's concept of the Origin of Life

10.2 Distribution of Life forms in time and space (Through charts)

10.3 Modern concept of Natural Selection

10.4 Mimicry and Colouration

10.5 Speciation and Isolation

10.6 Species concept

10.7 Human Evolution (in brief)

10.8 Biodiversity.

11. Population Biology & Social Physiology **[7M/10P]**

11.1 Concepts of Population Growth; Population control

11.2 Mental health, Tobacco smoking and chewing, Alcohols and alcoholism. Drug addiction. Global immunization

11.3 Balanced Diet – Balanced diet for infants, growing children, students, pregnant woman and aged (in tabular form). Malnutrition and causes of PCM, Marasmus, Kwashiorkor. Iron and Iodine Deficiency (Brief idea)
Population problem and its control
Brief idea of *in vitro* fertilization
Sexually transmitted diseases– Syphilis, Gonorrhoea
AIDS and its Prevention
Hepatitis B and its prevention
Polio-immunization (Pulse Polio)
Amniocentesis and inequality of sexes; Female foeticide.

12. Environmental Biology **[7M/9P]**

12.1 Definition of Ecosystem and its dynamics (Detritus, biogeochemical cycles in brief) concept of Biosphere, with special reference to Sundarban. Autecology, Synecology

12.2 Environmental Pollution
Concept of pollution of water, soil and air. Source and nature of pollutants. Effects and probable control strategies of water and air pollution (Brief description)

Concept of noise pollution and radioactive hazards
Bio-magnification, Bio-accumulation, 3 diseases due to excess absorption of metallic compounds in blood : Pb – Dyslexia, Hg – Minamata, Cd – Etai Etai

12.3 Green House Effect on biological system, Acid Rain, Ozone hole, BOD, COD, Thermal pollution, Green Bench, Pollution Control Board and its role. Earth Summit. Toxicology of industrial wastes
Wetland as nature's kidney.

13. Application of Biology [8M/12P]

13.1 (a) Biofertilizers
Pesticides and Biological Pest Control – Benefits and Hazards
(b)Domestication of animals and plants, Conservation of endangered species (with examples, 2 from plant, 2 from animal), Red Data Book, Green Data Book. Insects and their products - Seri-, Api- and Lac Culture

13.2 Biotechnology and its applications
a) Cloning and Transgenic organisms – Application in microbes, plants and animals
b) Sperm and Ova bank, Surrogate mother, Test Tube Baby
c) Totipotency of cells and maintenance of cell line
d) Idea about plant cell and tissue culture
e) Role of phytohormones in horticulture and agriculture
f) Bio-medical engineering – Applications (maximum **two** for each of the following)
i) Diagnostic instruments : ECG, EEG, Auto-analyzer
ii) Imaging – USG, CT Scan, X-ray, Fluoroscopy, Endoscopy, MRI
iii) Therapeutic : Laser Therapy, Dialyzer, Pacemaker (Reserve and Artificial), Heart-Lung Machine.

Practical
Full Marks – 20

1. Project [10M]

2. Identification [10M]

CLASS XII

Full Marks – 100
Theory - 80
Botany (Group – A)
Marks–25

1. Virus & Bacteria [5M/4P]

1.1 Characteristics of Animal Virus (Influenza Virus) and Bacteriophage (T2); Reproduction
(Comment : 4 characters with diagram)
1.2 Structure of TMV
(Comment : Diagram)
1.3 Structure of typical Bacterial cell *(E. coli)* and Reproduction—Asexual, sexual. (Comment : Diagram)
1.4 Brief bacterial classification on the basis of :
a) Morphology
b) Nutrition type
c) Staining behaviour
d) Thermal sensitivity
e) On the basis of flagella
(Comment : Chart and **one** example of each type.)
1.5 Utility of Bacteria
a) Agricultural – *Rhizobium* and other Nitrogen fixing bacteria
b) Commercial – Beneficial, for curd production, tanning and in brewery
c) Medicine – Antibiotics and Vitamin synthesis.

2. Tissue & Tissue systems [5M/4P]

2.1 Tissue :
Definition

Types – Meristematic and permanent tissue
(Comment : Types with characterization and function)
(Emphasis on permanent complex tissues)
Concept of cambium and secondary growth.
(Comment : Chart and diagram of each type)

2.2 Tissue Systems
Definition
Types :-
a) Epidermal with examples of Root hair, Stem hair and Stomata.
(Comment : Diagram)
b) Ground
(Comment : Charts and diagram)
c) Vascular – types with examples
Stele – its major types
(Comment : Charts and diagram)

3. Forms and Functions of plants [5M/15P]

3.1 Morphological Features and Functions of :

A. Root – Morphology and functions of Tap and Adventitious roots
(Comments : Diagram)
a) Differences between Tap and Adventitious Roots
b) Modifications – Radish, Prop root, Pneumatophore, Epiphytic root – Functions, Forms, Examples

B. Stem : Introduction – Morphology and Functions
Modifications :
Sub-aerial-off set – Water Hyacinth
Underground – Potato
Aerial – Phylloclade – Cactus
Thorn – *Duranta*
Bulbil – *Dioscorea*
(Comment : Definition, Example and figure)

C. Leaf – Morphology, functions
Phyllotaxy – Types with example
Stipule – Normal two types :
a) Free lateral – China rose
b) Adnate – Rose
Modified two types :
a) Foliaceous – Pea
b) Spinous – *Acacia*
Leaf Modifications :
Spine of Cactus, Pitcher plant phyllode
(Comment : All examples should be explained with figures)
Types of leaves :
Simple, Compound – pinnate, palmate (mention all subdivisions)
(Comment : In a chart, with example and diagram)
Homophylly and Heterophylly.
(Comment : Mention only with diagram)

D. Flower
a) Typical flower (China rose) – Different parts
Flower as a modified shoot
Types of flower : regular, irregular, actinomorphic, zygomorphic.
(Comment : Examples with diagrams)
Cohesion and adhesion of stamens: Monadelphous, Diadelphous, Polyadelphous, Epipetalous, Episepalous, Gynandrous.
Relative position of different whorls of flower on the thalamus:
(Comment : Examples with line diagrams)
Hypogynous, Perigynous, Epigynous
Types of ovary – Superior, Inferior
*Placentation, *Aestivation – Definition
(*Comment : Example of Musaceae and Malvaceae)
b) Floral formula : Definition, Symbols used in floral formulae
Floral formulae of the following families / plants –
Monocot – Banana (*Musa paradisiaca*)
Family– Musaceae

Dicot – China Rose (*Hibiscus rosa-sinensis*)
Family – Malvaceae

c) Inflorescence – Definition, Major types –
   i) Cymose – Definition with Example
   ii) Racemose – Definition with Example
   iii) Special – Hypanthodium or Cyathium – Definition with Example

(Comment : Detailed classification not required. All types should be explained with line drawings and real figures)

d) Pollination – Definition
Types :- Self and cross-pollination
Agents of pollination
Characteristic features in relation to pollination types
Merits and demerits of Self and Cross Pollination (Briefly)

e) Fertilization – Process of double fertilization in a flowering plant
(Comment : Diagram)

E. Fruit : Definition only with examples
Types :- True and False
True :- Simple – Mango
(Comment : Figure with L.S.)
Aggregate :- Custard apple
(Comment : Figure with L.S.)
Multiple – Jackfruit or Pineapple
(Comment : Figure with L.S.)
False : Apple

F. Study of Seeds :- Dicot & Monocot
Edible parts of some known fruits : Apple—Thalamus; *Dillenia* – Calyx; Pomegranate ('Bedana') – Succulent testa; Mango – Mesocarp; Pea—Cotyledon; Coconut – Endosperm; Rice – Endosperm
Dispersal of fruits and seeds—Types with examples
Description of a monocot & a dicot plant
(Comment : Rice & Pea with charts)

3.2 Plant Breeding
Definition, significance
1. Hybridization : definition Hybridization Technique : Emasculation
2. Breeder's Kit (Brief idea)
(Comment : with charts and diagrams)
3. Micropropagation.

4. Photosynthesis [6M/5P]

4.1 Major photosynthetic pigments
4.2 Outline concept of light and dark reaction phases
4.3 Basic idea of bacterial photosynthesis
4.4 C_2, C_3 C_4 pathway, CAM
(C_2 and CAM in brief, with diagram only)
4.5 Photorespiration.

5. Growth, Metamorphosis and Ageing [4M/5P]

5.1 Phases and factors of Growth
5.2 Differences between plant growth and animal growth
Grand period of growth
5.3 Differences between growth and development
5.4 Metamorphosis – Definition, Types and role of Hormones
5.5 Senescence and ageing of plants and animals and its factors
5.6 Abscission
5.7 Pheromones
5.8 Growth of seedling and the role of Gibberellic Acid
5.9 Photoperiodism.

Zoology (Group – B)
Marks–25

1. Classification of Animal Kingdom [4M/5P]

a) Classification with salient features of each phylum; Non-Chordata upto phylum; Example of each phylum
b) Chordata: Characteristics of Hemichordata, Urochordata, Cephalochordata with examples

c) Vertebrata: Characteristics of Agnatha, Gnathostomata, Osteichthyes, Chondrichthyes, Amphibia, Reptilia, Aves, Mammalia with examples

d) Mammalia: Salient features of Prototheria, Metatheria and Eutheria

(Comment: Minor coelomate and acoelomate phyla excluded).

2. Outline features of mammalian form (Eutheria) Guinea-pig (*Cavia porcellus*) [6M/6P]

a) External features

b) Digestive System with special reference to Coprophagy or Caecotrophy

c) Respiratory System

d) Anatomy of Heart together with flow chart of blood circulation through heart

e) Arterial System—Distribution of main arteries only

f) Venous System – Distribution of main veins with special reference to Hepatic Portal System

g) Excretory System

h) Reproductive System

(Comment : necessary diagram for each system to be drawn).

3. Outline Knowledge of Medical Zoology [4M/4P]

a) Outline idea of disease, their causative organism, mode of infection, symptoms and preventive measures of :

i) Malaria

ii) Filaria

iii) Ascariasis

iv) Taeniosis

b) Distinguishing features of *Culex*, *Anopheles* and *Aedes*

c) Life Cycle and comparative study of *Culex* and *Anopheles*

d) Control measures of mosquito

(Comment: Mention other mosquito-borne diseases – like encephalitis, meningitis; Tsetse-fly carrying *Trypanosoma* causing sleeping sickness; *Leishmania* causing Kala-azar).

4. Outline Knowledge of Agricultural Zoology [6M/5P]

A) Fishery – Pisciculture

i) Briefly explain with example – Major Carp, Minor Carp

ii) Comparison between major and minor carp

iii) Brief idea with example of exotic fish

iv) Mechanism of induced breeding—hypophysation

v) Culture of major carp; composite culture and composite mixed culture

vi) Common diseases of carp – Gill rot, fin or tail rot, Dropsy

B) Pest and their management

i) Definition of Pest

ii) Types of Pest –

a) Mammalian pest – nature of damage by *Bandicota bengalensis*

b) Insect pest—Mention the names of *Scirpophaga (=Tryporyza) incertulus*, *Leptocorisa acuta*, *L. varicornis*, *Dicladispa (=Hispa) armigera**

c) Outline idea of biological control of insect pest – control of mosquito by *Gambusia*, *Panchax, Tilapia* etc.

*Changes in names of insect pests as per the rules of International Commission for Zoological Nomenclature (ICZN).

5. Outline idea about Economic Zoology [5M/5P]

a) Poultry – Types of poultry birds; high yielding varieties of poultry birds

b) Prawn Culture – Methods with special reference to tiger prawn

c) Pearl Culture – Importance of pearl culture
d) Apiculture – Types of honey bee (drones, workers, queen); Composition and uses of honey
e) Sericulture – Types of mulberry plants; Definition of Silk; types of silk and silk worm (Muga, Eri, Tussore and Mulberry silk)
Life cycle of mulberry silk worm with reference to diapause and voltinism. Structure of silk worm larva and silk gland. Disease of silk worm – Flacherie, Muscardine, Grassarie, Pebrine. Control of Muscardine only.

Physiology (Group C)

Marks - 30

1. Conservation of matter and energy in the human system **[5M/10P]**

a) Nutrition

Basic Constituents of food and their nutritional significance

B.M.R. – factors controlling; Respiratory quotient (Definition and significance only)

Vitamin – dietary sources, functions, deficiency symptoms (in tabular form). Provitamin, Antivitamin, Pseudo-vitamin, Hyper-vitaminosis (Definition only). Nitrogen Balance

Biological and Nutritional value of protein

b) Biochemistry and Metabolism

Classification and properties of carbohydrates, lipids and proteins

Metabolism Definition only

Elementary idea only of the following :

Metabolic pathways - (only biochemical pathways, no enzyme names needed)

Glycogenesis, Glycogenolysis, Gluconeogenesis. Oxidation of fatty acids, Ketone body formation and its significance. Amino acid pool

Deamination, Transamination and Decarboxylation (Definition only)

[For glycolysis, Krebs' Cycle and Electron Transport Chain (refer to 8.1 of Class XI syllabus)]

c) Alimentation

Structure in relation to functions of the alimentary canal and the digestive glands

Functions of the digestive juices (Saliva, gastric juice, pancreatic juice, intestinal juice) including bile

Digestion and absorption of carbohydrates, lipids and proteins in tabular form

Clinical conditions of G-I system.

Scurvy, Peptic and Gastric ulcers. Gastritis, Cirrhosis of Liver. Colon cancer. Starvation, Fasting and obesity.

2. Blood and the Body fluids. **[2M/2P]**

Composition and Functions of Blood

Blood Coagulation – Process in brief and anti-coagulants. Use of Na-citrate as anticoagulant in blood bank

Blood group – A, B, O System and Rh factor. Blood Transfusion

Lymph and tissue fluid formation and function.

3. Cardio Vascular System **[3M/5P]**

Anatomy of the Heart – Junctional tissues of the heart

Origin and Propagation of cardiac impulse

Histological structure of arteries, veins and capillaries

Cardiac Cycle – Atrial and ventricular events only; Cardiac Cycle Time; Heart sound

Cardiac output – Definition, Stroke volume and Minute volume. Principle of measurement only. (Fick method)

Blood Pressure : Factors controlling & Measurement

Causes of common cardio-vascular Diseases – Dietary Factors. Smoking, Stress,

Diseases – Dietary Factors. Smoking, Stress, Diabetes, Alcoholism

Cyanosis (Blue Baby).

4. Respiratory System **[3M/3P]**

Respiratory tract : From Larynx – Lung, Mechanism of breathing – role of respiratory muscles : intercostal muscle and diaphragm only

Significance of physiological and anatomical dead space

Tidal volume, inspiratory and expiratory reserve volumes, residual volume, vital capacity (Definition & volume only)

Composition of inspired, expired and alveolar air

Active and Passive smoking

Common Respiratory Diseases and their causes – Asthma, Tuberculosis, Lung Carcinoma. Hypoxia, Anoxia, Apnoea, Dyspnoea (Definition only)

Mountain sickness and acclimatization (in brief).

5. Nerve and Muscle – The Excitable Tissue **[2M/3P]**

Different types of muscles and their structure (in brief with diagram) Red and white muscle. Fast and slow muscle

Properties of muscle –

1) Excitability, 2) Contractility, 3) All or None Law, 4) Refractory Period, 5) Summation of stimuli, 6) Tetanus, 7) Rigor Mortis

Sarcotubular System and the mechanism of muscle contraction. Isometric and Isotonic Muscle Contraction

Receptors – Classification in brief (According to function)

Synapse – Structure and mechanism.

6. Nervous System **[3/3P]**

A brief outline of the organization and basic functions of nervous system (Central & Peripheral)

Functions of 5 major parts of the Brain– Cerebral Cortex, Thalamus, Pons, Cerebellum, Medulla

Cranial Nerves : Distribution and function

Ventricles of the Brain and Cerebro-Spinal Fluid

Spinal Cord – Structure and major functions. Reflex Arc (types) and Reflex Action : Conditioned and Unconditioned reflexes

Functions of the Autonomic Nervous System

Nervous system – Sympathetic and Parasympathetic – Origin, Distribution and Functions.

7. Endocrine System **[2M/4P]**

Definition of Endocrine gland and hormones

Classification of Hormones.

Elementary Idea of Hormone Action (Protein and Steroid Hormones)

Functions and disorders and related diseases of the following glands:-

(i) Pituitary (ii) Thyroid (iii) Pancreas (iv) Adrenal (v) Parathyroid (vi) Placenta

Elementary idea of gastrointestinal hormones. Prostaglandins – Definition and Functions.

8. Excretory System **[2M/2P]**

Histology and function of the nephron (Brief idea)

Diabetes insipidus. Normal and Abnormal Constituents of urine

Accessory Excretory organs – Skin, Liver, Salivary Gland, Large Intestine (mention only).

9. Skin and Body Temperature Regulation **[1M/1P]**

Physiology of swe'ıt secretion. Sensible and insensible perspiration. Role of hypothalamus in body temperature regulation.

10. Reproduction and Developmental Biology **[4M/4P]**

Primary and Secondary sex organs and secondary sex characters. Testis – Histology, Testicular Hormone and their functions.

Spermatogenesis with structure of sperm.

Ovary – Histology. Ovarian hormones and their functions. Oogenesis with structure of mature graffian follicle

Menstrual cycle and estrus cycle (Brief idea). Fertilization and Implantation

A brief idea about cleavage, morula, blastula and gastrula formation.

11. Immunology **[3M/2P]**

A brief idea of antigen and antibody. Elementary knowledge of inherited, acquired, humoral, cell mediated immunity. Active and passive Immunity.

Practical
Full Marks – 20

1. Experiment **[15M]**

a) Botany [5M]
b) Zoology [5M]
c) Physiology [5M]

2. Laboratory Note Book **[3M]**

3. Herbarium **[2M]**

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

STATISTICS

CLASS – XI

Theory
Full Marks – 80

Mathematics [15M/28P] : Binary, Octal, Decimal and Hexadecimal representations of real numbers (c: only conversion from one system to another, no arithmetic operation) [4]; Rounding off of numbers, absolute, relative and percentage errors [3]; Inequalities (c: Some fundamental inequalities such as the square of a real quantity is non-negative, A.M. ≥ G.M. ≥ H.M. for a set of positive quantities, Cauchy-Schwarz inequality – this topic must be extended to this limit) [3] ; Concept of Determinant, Matrix (Basic operations on 2 × 2, 2 × 3, 3 × 2 & 3 × 3 matrices; computation of inverse without any mention about the notion of rank of matrix); Solution of system of linear equations by Cramer's rule [8]; Concept of polynomials [2]; Differencing (c: concept of 'Delta'-operator required for interpolation) [1]; Simple interpolation by Newton's forward and backward interpolation formulae (c: derivation of error terms excluded) [4]; Elements of set theory (c: Basic concepts including algebra of sets) [3].

Descriptive Statistics [40M/30P] : Collection and Scrutiny of data for reporting errors, internal consistency and outliers; types of data for example primary vs. secondary, time series vs. cross sectional, ordinal vs. nominal; questionnaires design for collection of data; tabulation of data diagrammatic presentation of data [12]; frequency distribution and graphical representation of a frequency distribution [3]; Measures of Central Tendency (mean, median, mode); measures of dispersion (range, mean deviation, standard deviation, coefficient of variation); quantiles and percentiles, quartile deviation, moments (c: raw and central moments upto fourth order and their conversions) and measures of skewness and kurtosis (c: associated inequalities involving b_1 and b_2 coefficients) [15].

Probability [25M/22P]: Random experiments and associated sample spaces, notions of events and operations with events, classical and statistical definitions of probability and their limitations [7]; theorem of total probability, Bonferroni inequality, compound events, conditional probability and Bayes' theorem, statistical independence of events and problem sums (c: For no. of events not exceeding three) [15].

Practical
(Problems : 10; Laboratory Note Books 5; Viva-voce-5)

Full Marks : 20

1. Representation of numbers (c: only conversion from one system to another, no arithmetic operation); Interpolation [4].
2. Tabular and diagrammatic representation of data [2].
3. Construction of one-way frequency tables and their diagrammatic representations [2].
4. Calculations relating to measures of Central tendency [4].
5. Calculations relating to measures of dispersion [4].
6. Calculations relating to moments, skewness and kurtosis [4].

CLASS – XII

Theory

Full Marks : 80

Mathematics [5M/14P]: Differentiation and integration (with emphasis on probability mass functions / density functions included in the syllabus) [5], maximum and minimum of a function (with emphasis on probability mass functions / density functions included in the syllabus) [4], area under a curve and gamma integral (with emphasis on normal density and exponential density and their moments up to 4th order c: sums under this topic must be confined to the standard distributions included in the syllabus. Standard definition of gamma integral and result involving Gamma (½) may be used without derivations) [5].

Descriptive Statistics [25M/20P] : (c: Two-way) contingency tables and measures of association, notion of independence [5]; Bivariate data, scatter diagram, two-way frequency distribution, marginal and conditional distributions, simple correlation and regression, least square method [9]; Rank data and rank correlation, (c: Spearman's rank correlation coefficient – case of no tie) [3]; concept of trend in time series data, trend determination by fitting straight line and exponential curves and by moving average method. [3]

Probability Distributions [30M/28P]: Random variables, probability distributions of discrete and continuous random variables, mean, variance and higher moments of random variables (c: upto 4th order), skewness and kurtosis [12]; Binomial, Poisson, Uniform, Exponential and normal distributions and their properties, problem sums; fitting of above distributions, concept of goodness-of-fit [16].

Sampling & Estimation [20M/23P]

Sampling and Sampling Distributions [15P] : Population and sample, parameter and statistic; Basic principles of sample survey, advantages of sample survey over complete enumeration [3]. Concepts of simple random sampling with / without replacement, linear systematic sampling, stratified and cluster sampling, Practical methods of drawing random samples (use of random number tables) [8]. Concept of sampling distribution of sample mean and its standard error [4].

Basic concepts of Estimation [8P] : Estimation of binomial proportion, Poisson mean, exponential mean, normal mean and variance. {c: Estimation by sample analogue (method of moments); Ideas of unbiasedness and minimum variance}[8].

Practical
(Problems : 10; Laboratory Note Book 5; Viva-voce : 5)

Full Marks : 20

1. Construction of two-way contingency / frequency table, simple measures of association [2].
2. Scatter diagram, Calculation of correlation and regression coefficients for bivariate continuous data; rank correlation [4].
3. Determination of trend in time series data [3].
4. Drawing of random samples under simple random sampling with/without replacement using random number tables [2].
5. Drawing of samples under stratified, linear systematic and cluster sampling [2].
6. Sampling distribution of sample mean from a finite population based on simple random sampling with / without replacement (start with a population having finite number of values; choose a sample size (2,3, etc.), list all possible samples of the chosen size, calculate sample mean based on each such sample, obtain the frequency distribution of the sample mean and display diagrammatically; study effects of varying sample sizes by choosing different sizes) [4].
7. Estimation of population mean and its standard error under simple random sampling with / without replacement [2].
8. Applications and Fitting of binomial, Poisson, exponential and normal distributions [4].
9. Collection and analysis (as far as practicable) of data from a given survey questionnaire [2].

[M/P] = Marks/Periods ; c = Clarification
Figures within [ ] indicate periods required for the topic/topics concerned

GEOLOGY

CLASS XI

Full marks – 100

THEORY

Total Marks - 80

1. Geology [10M/10P]

Definition and broad scope. The earth as a planet—its position in the solar system, internal structure of the earth, oceans and continental margins.

2. Processes of origin of landform [15M/15P]

Wealthering and mass washing. Geological work of running water, underground water, wind and glacier.

3. Structural elements of rocks [15M/15P]

Linear and planar; attitude, strike, dip plunge, pitch. Folds—antiform, synform, upright, inclined, recumbent, plunging and nonplunging folds. Faults—normal, reverse, thrust, overthrust and nappe.

4. Definition of mineral [10M/10P]

Amorphous and crystalline state of matter crystal form, habit and symmetry.

5. Physical characters of minerals [20M/20P]

Colour, lustre, streak, hardness, cleavage, fracture, specific gravity, magnetism. Physical character of following minerals graphite, sulpher, galena, sphalerite, pyrite, chalcopyrite, bauxite, haematite, magnetite, chromite, pyrolusite, psilomelane, calcite, dolomite, barite, gypsum, fluorite, biotite, muscovite, quartz, feldspar, amphibole, pyroxene, garnet, tourmaline

6. Definition of rocks, classification of rocks [10M/10P]

Igneous, sedimentary and metamorphic. Types of intrusion dyke, sill, batholith

PRACTICAL

Total Marks - 20

a) Description and use of clinometer compass; study of topographical map [5M/5P]

b) Identification of minerals based on physical properties [10M/10P]

Graphite, sulphur, galena, calcite, quartz, feldspar, muscovite, biotite, chalcopyrite, pyrite, hematite, magnetite, pyrolusite, tourmaline and garnet.

c) A field class of short duration to show natural occurrences of rocks and minerals. [5M/5P]

CLASS XII

Full marks – 100

THEORY

Total Marks - 80

1. Petrographic character of the following rocks [15M/15P]

Granite, syenite, dolerite gabbro, basalt, pegmabite sandstone, conglomerate, limestone, breccia, gneiss, schist, slate, phyllite, marble, quartzite, amphibolite

2. Principles of optical mineralogy. [10M/10P]

Optical characters of quartz, feldspar, pyroxene, amphiboles micas.

3. Fossils [10M/10P]

mode of preservation and uses, types of fossils—vertebrate, invertebrate and plants.

4. Principles of historical geology [10M/10P]

Law of superposition. Geological time scale

5. Phanerozoic history of India [15M/15P]

Gondwanas and Deccan Trap. Precambrian Geology of India

6. Natural resources [10M/10P]

coal, petroleum, iron, aluminium, copper and water

7. Earthquake, isostacy, origin of mountains, Volcanoes [10M/10P]

PRACTICAL

Total Marks - 20

a) Study of geological maps showing horizontal and inclined beds with intrusions and extrusions [8M/8P]

b) Identification of the following rocks [8M/6P]

granite, basalt, dolerite, pegmatite, gneiss, shale, sandestone, limestone, conglomerate, coal, schist, marble, quartzite, amphibolite.

c) Identification of following fossils [6M/6P]

Glossopteris, vertebraria, calymene halysites productus, arca, turritela, ceratites, hemiester nummulites, equus

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

ANTHROPOLOGY

CLASS XI

Full marks – 100

I. History, aim and scope in Anthropology [20M/20P]

What is Anthropology (and its different branches). Its interrelationships with other disciplines (Biology, Geology, Psychology, Sociology, Economics, Education, Political Science and Geography). The distinctiveness of Anthroplogy as a specific discipline.

II. Man's emergence and the development of culture [40M/40P]

Origin of Men—brief discussion of Hemo erectus (Pithecanthropines). Homo sapiens neandarthalensis and Homo sapiens sapiens (Cromagnon).

III. Man and Society [40M/40P]

Characteristics of human society. Different types of society—Food gatherers, Pastoral and Agriculturists. Family types : roles of individuals in the family; clan, tribe and caste.

CLASS XII

Full marks – 100

I. Biology of man [30M/30P]

Major division of mankind—Negroid, Mongoloid, and Caucasoid; their geographical distribution and physical features (hair, skins colour, stature, head and nose form). Major ethnic groups in India according to Risley and Guha.

II. Man and environment [70M/70P]

Environment during pleistocene epoch with special reference to glacial and interglacial periods. Human needs created by environment and the adjustment of man through cultures—Palaeolithic, Mesolithic, and Neolithic with special reference to India. Technological development as revealed from tool types. Development of economic pursuits from hunting-gathering to food production; present day tribal economic may be used in illustration.

Different environmental situation in West bengal—ways of life with special reference to the material culture of the Lepcha, Toto, Santal, Lodha-Supernatural beliefs of the above-mentioned tribes.

Development of Anthropology in India indicating major stages.

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

ECONOMICS

CLASS-XI

Full Marks—100
Economics - Nature, Scope and Subject Matter

Unit : 1 Economics as a Social Science with special emphasis on human development. **[2M/4P]**

1. Economics as a study of Wealth and as a study of Man - Study of Wealth and Efficiency - Study of Man and Equity & Justice.
2. Western social institutions and economic theory emphasizing efficiency as the basis of material wealth accumulation.
3. Human development and equity & justice and the necessity of an alternative approach - Life sustenance, Self-esteem and Freedom as the basis of human development.
4. Political-economic issues of divergent social institutions under the two paradigms.
5. Introduction to Micro - and Macro-economics.

Unit : 2 Man - Nature interaction as the basis for environmental sustainability. **[6M/6P]**

1. Use of Nature in production and consumption - (a) source of natural inputs : renewable and non-renewable resources (b) receiver of production and consumption wastes - both acting as limits to growth.
2. Different types of pollution - concept of environmental sustainability : limiting the use of non-renewable resources, preserving the potential of nature to produce renewable resources and respecting (to sustain) the eco-systems.
3. Connecting environmental sustainability with "sustainability of economic growth" and "sustainability of social priorities / compulsions" : (a) increase in national as well as per-capita income alone as savage growth that neglects both social sustainability (equity & justice - social priorities) and environmental sustainability, (b) increase in income with distributive justice alone as socially benign growth that neglects environmental sustainability, (c) increase in income with environmental sustainability alone as environmentally sustainable growth that neglects social sustainability and (d) increase in income with distributive justice and concern for environment as Sustainable Development that realises efficiency-based growth with both social and environmental sustainability.
4. People's participation in environment management and human development.
5. The environmentalists and the non-environmentalists.

Basic Economic Concepts

Unit : 1 Circular flow to focus production, consumption and distribution. **[8M/6P]**

1. Production – material production and creation of utility through exchange – factors of production : land, labour, capital and entrepreneurship – resource scarcity and opportunity cost – short-run and long-run in production-returns within scale and returns to scale – the law of variable proportions-the production-possibility frontier-efficient and inefficient production-division of labour-specialisation and absolute and comparative advantages – economic growth and shifts of the PPF.

2. Consumption – definition and determinants – simple analysis of the consumption function · consumption in a class-divided society and different consumption baskets across different income classes.
3. Distribution – factor prices and factor shares – determinants (intuitive analysis only)
4. Households and Firms as the basic sectors of the economy – households as the owner of resources and firms as the users – the circular flow of income and expenditure – the three central problems: "What, how and for whom?"

Working of an economy under alternative systems.

Unit : 1 Alternative economics systems – nature and distinctions. [10M/10P]

1. Private property and market economy – features, merits and demerits.
2. State property and planned economy – features, merits and demerits.
3. Mixed economy (with the Indian economy as an illustrative example) – features, merits and demerits.
4. Common property resources and their uses / abuses (with the Indian economy as an illustrative example).

Unit : 2 Alternative approaches to the problem of allocation – rationing through market and rationing through command. [12M/10P]

1. Definition of price – absolute price and relative price.
2. Use of the price system to solve the allocation problem in a market economy (intuitive reasoning) –given factor endowments, prices allocating scarce resources among alternative uses – use of the PPF for illustrations.
3. Use of commands to solve the same allocation problem in a planned economy– commands on factor use determining production and commands on distribution determining consumption – with simple illustrative examples.
4. Connecting the patterns of solving the allocation problem with alternative regimes of property rights – problem of settling the issue of allocation under undefined (production and consumption externalities with simple examples) or ill-defined (common property resources with simple examples) property rights – the necessity of well-defined property rights – examples on local, regional, national and inter-national problems in the absence of well-defined property rights (simple illustration on intellectual property rights).

Dynamics of the economy

Unit : 1 Growth and development [7M/10P]

1. Economic growth – definition and sources (labour,physical capital, human capital and technology) – national income-based growth indicators – benefits (less poverty and unemployment, improved living standards and life-styles) and costs (current sacrifice, social costs) of growth – sequencing of benefits and costs.
2. Uneven pattern of growth and persistence of economic backwardness in countries like India – features of economic under-development – differences among the less-developed countries.
3. Economic development – definition – distinction between growth and development – population and economic development.

Unit : 2 Development approaches [10M/10P]

1. Per-capita income as the index of development – income-based classification of countries – necessity of extending the concept of development to distributive justice to address the problems of unemployment, inequality and poverty.
2. Basic needs approach – indicators of basic needs – health, education, nutrition, water

supply, sanitation and housing.

3. Development defined in terms of entitlement and capability – entitlement-failure and hunger despite food-abundance.
4. Human development – definition and determinants – equity, sustainability, productivity and empowerment – the Human Development Index – classification of countries according to the HDI – differences in income-based and HDI-based classifications.

Understanding the environment. [6M/10P]

1. Nature of the environmental problem in India—(a) industrial and urban pollution—health hazards-air pollution, water pollution, sound pollution and pollution due to poor management of solid waste; (b) agricultural and rural pollution—productivity loss—soil erosion and degradation, water pollution and deforestation; (c) loss of biodiversity—loss of flora and fauna—ecological imbalance and (d) dirty-tourism—loss of marine and mountain-environment—necessity of ecotourism.
2. Environmental policy of India—functions of the Central Pollution Control Board and the State Pollution Control Boards—instruments—Commands and controls, taxes and charges, collective actions—recent international deliberations and a critical note on the compulsions of compliance.

Understanding the Indian economy (Part-1)

Unit : 1 Analysis of the agricultural economy of India. [12M/10P]

1. Role of agriculture in the Indian economy.
2. Product market—cach crops and food crops—marketable surplus of food-grains and its determinants.
3. Green revolution and its phases.
4. Food policy of India—the public distribution system.
5. Economic reforms and Indian agriculture—problems and prospects.

Unit : 2 Analysis of the industrial economy of India. [12M/10P]

1. Industrial Policy Resolution, 1956-role of the public sector enterprises in India—performance and problems.
2. Trends in industrial production—stagnation and structural retrogression.
3. The small sector in India—importance, performance and problems—policies of the government.
4. Economic reforms—problems and prospects.

Understanding the economy of West Bengal

Unit : 1 Land reforms, agriculture and decentralised planning. [10M/10P]

1. 'Land reforms' as a cornerstone of the rural development strategy—the indirectly induced changes (those resulting from the spontaneous operation of socio-economic processes) and the directly effected changes (the land reforms).
2. Charges in operational holdings in West Bengal following the Operation Barga—high share of leased-in land among the marginal and small farmers-inter-state comparisons; land reforms from above and land reforms from below—the Operational Barga as an illustration of mutuality between the two dynamic forces.
3. Agricultural sector and the recent breakthrough achieved by West Bengal—changes in the production of the major crops since 1980-81—average annual compound growth rates of food grains in different states to locate the success of West Bengal.
4. Indicators of the changing agrarian economy of West Bengal—changing proportion of agricultural labour households; spread of irrigation (with emphasis on utilisation of minor irrigation

potential), fertiliser consumption etc. and the increasing index of multiple-cropping; preservation of agricultural land.

5. Decentralised planning—definition and fundamental features—priorities of planning in West Bengal—involvement of the Panchayats.
6. Organisational set-up for district and block planning—District Planning Committees and Block Planning Committees—financial provisions : tied and untied funds—formulation, implementation and monitoring of plans—public accountability—sustainability and decentralised resource mobilisation.

Unit : 2 Industry and services (with emphasis on information and bio-technologies) [5M/5P]

1. Major industries of West Bengal—general index of industrial production in West Bengal—index for the manufacturing sector—pattern of industrialisation in West Bengal—directional changes in recent years and factors favouring such changes—scope of Information Technology in West Bengal (with special emphasis on job opportunities as self-employed service providers).
2. Scope of Bio-technology in West Bengal
   (a) Origin and definition : Old Vs. New Bio-technology.
   (b) Importance and aims of Bio-technology.
   (c) Possibilities of application of Bio-technologies in West Bengal.
   The state is highly rich in bio-resources, rich in trained and resourceful manpower in Agriculture, Chemicals, Pharmaceuticals, health care industries and being the gateway of various South East Asian Countries, has its natural potential for developing Bio-tech Industries which have been declared as a high priority sector by the Govt. of West Bengal.
   (d) Development of Infrastructure in West Bengal to enhance Bio-technology Activities.
   (e) Bio-technology and Environment :
   (a) Bio-diversity and its conservation.
   (b) Reasons of concern for loss of Bio-diversity.
   (c) Steps to preserve Bio-Diversity.
   (d) Effect of genetically engineered and manipulated seeds and other agricultural crops an human health.

CLASS-XII

Full Marks—100

Basic tools of economic analysis [15M/14P]

1. One table and its description.
2. Diagrammatic presentation and summarisation of data – line diagram, ban diagram and pie diagram.
3. Line diagram – concepts of slope and change of slope (with numerical examples only)
4. Summarisation of data – simple illustrations to describe A.M. and G.M.
5. Index Number – definition and purpose; commonly used Index Numbers – Price Relatives and Fixed Base Index Numbers: problems in the construction of index numbers; simple description of some Index Numbers : Laspeyre's, Paasche's, Fisher's and Marshall-Edgeworth Index Numbers; Simple descriptions of some official index numbers – Wholesale price index, Consumer price index and Cost of Living Index (separate treatment for agricultural and industrial workers), Indices of industrial and agricultural product (with the Indian economy as exampl Index number of security prices and Ind Numbers of quantum and price level o imports and exports.
6. Fundamental idea of dispersion – range standard deviation and the Lorenz Curve (simple description only).

7. Scatter diagram and the basic ideas on correlation and regression.

Working of the price system

Unit : 1 Price determination through demand – supply interaction. [14M/10P]

1. Demand – definition, the law of demand and its cardinal explanation, factors determining demand, the demand schedule and the demand curve, change in quantity demanded and change in demand, exceptions to the law of demand.
2. Cost – definition – explicit and implicit costs – investment and production costs – fixed and variable costs – the short-run cost curves – marginal cost and supply price (intuitive explanation) – the law of supply – the supply curve – change in quantity supplied and change in supply.
3. Individual and market demand curves, firm and industry supply curves; price determination through the interaction between demand and supply curves – comparative statics.
4. Elasticity – definition : own-price, cross-price and income elasticities of demand; determinants and uses of the concepts of demand elasticities; own price and cross-price elasticities of supply and their significance.

Unit : 2 Market forms – perfect competition and monopoly [14M/10P]

1. Market – definition – clssification of markets according to time.
2. Revenue – definition and concepts – relation between marginal revenue and own-price elasticity of demand.
3. Clsssification of markets according to degree of competition – basic features of perfect competition, monopoly, monopolistic competition and oligopoly (simple logical descriptions only) with appropriate examples, wherever feasible.
4. Profit – definition – distinction between gross and net profit – profit maximisation as the objective of a business firm – simple deduction of the conditions for profit maximisation (using numerical and graphical illustrations).
5. Short-run equilibrium for a competitive firm – intuitive explanation of zero long-run profit.
6. Monopoly equilibrium – distinction between perfect competition and monopoly-concept of monopoly power – principle of cost-determined pricing.

Analysis of the aggregate economy

Unit : 1 National income accounting [12M/12P]

1. National income – definition – methods of national income estimation-closed and open economies – GDP, NDP, GNP, NNP - market price and factor cost estimates.
2. GDP deflator – concept – money income and real income - disposable income-tax and transfers.
3. Some applications of the concepts of central tendency and dispersion to national income and its distribution – per-capita income – uses of the concept – difficulties.
4. Problems of estimating national income (with the Indian economy as an illustrative example).

Unit : 2 Analysis of macro–issues. [18M/18P]

1. Money and Banking :
   (a) Asset - definition - physical and financial assets –liquid and illiquid financial assets – money and its functions.
   (b) Bank – definition and distinction between bank and non-bank financial intermediaries – commercial bank and its functions – the Central Bank and its functions – definition of money supply.
   (c) Money supply and inflation – effects of inflation.
2. Public Finance :
   (a) Scope and objectives of Public Finance – Public goods : non-rivals, non-

excludables and externalities as the conventional scope – growth, stability and equity as objectives (logical analysis only).

(b) Sources of revenue – tax and non-tax sources – revenue and capital receipts.

(c) Types of public expenditure – revenue and capital expenditure.

(d) Budget deficit – basic concepts – deficit-financing and its effects.

3. Balance of Payments :

(a) Balance of trade and balance of payments – distinction – current and capital accounts – autonomous and accommodating transactions – balance of payments balances itself.

(b) Exchange rate – definition of nominal exchange rate – fixed and flexible exchange rates – real exchange rate as the terms-of-trade - merits and demerits of the two regimes.

(c) Gains from trade – case for protectionism in a less developed country like India– rationality of protectionism in the post – WTO regime.

Development challenges (with India as an illustrative case)

Inequality, poverty and unemployment. [7M/10P]

1. Analysis of inequality with respect to the distribution of (a) income, (b) ownership of cultivable land and (c) capital in the private corporate sector on the basis of available data.
2. Poverty—definition (use of the concept of Head Count Ratio)—official estimates of poverty—poverty-alleviation programmes—causes for persistence.
3. Unemployment—types of unemployment and their causes—employment-generating policies of the government—role of entrepreneurship.

Understanding the Indian economy (Part-2)

Unit : 1 Analysis of banking, insurance and trade. [12M/15P]

1. **Banking :** (a) monetary policy of the RBI, (b) evaluation of the public sector banks, (c) black money : causes, consequences and control-policies (d) financial sector reforms.
2. **Insurance :** definition—types : individual and collective insurance—analysis of its limited expansion in India—analysis of the Indian insurance companies (with special reference to the LICI)—economic reforms and the insurance sector.
3. Trade policy of the import-substituting industrialisation phase—crisis of the eighties—economic reforms and trade liberalisation—analysis of the features of the WTO and its assessment with respect to India—foreign aid.

Unit : 2 Analysis of the Indian public finance. [8M/10P]

1. Federal finance in India—fundamental features and problems.
2. Performance of the Indian Fiscal system—an evaluation.
3. Fiscal reforms—tax. public expenditure and public debt.

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

COMPUTER SCIENCE

CLASS-XI

THEORETICAL
Full Marks—70

A. Brief Review of Computer Systems [30M/20P]

Computer Organisation

CPU, Memory, I/O, Storage Devices and other Peripherals. Storage Media, Access Characteristics, etc.

Data Representation

Review of Number Systems-Binary, Octal, Hexadecimal, Conversion of binary to decimals, binary to Octal, Hexadecimal and vice-versa, Different methods of negative number representation-1's complement, 2's complement and signed magnitude.

Topics on Boolean Algebra

Review of logical operations; Combinationals—Logic functions-Basic Gates and realization of complex functions, De-Morgan's theorems, Universal Gates, Multiplexers, Decoder, Encoder, De-Multiplexers.

Boolean Arithmetic

Half Adder, Full Adder, Half Subtractor, Full Subtractor, Multiplication, Booth's Algorithm.

Sequential logic circuits

Ban's concepts, Flip-flops, Synchronous & Asynchronous concepts, Registers, counters.

B. Operating systems [10M/10P]

Functions and role of operating system

Familiarities with different commands and utilities; DOS and Windows.

Study of Unix/Linux with respect to commands and utilities.

C. Programming with C [30M/30P]

Concept of Algorithms and Data Structure

Character set, Constants, Variables, Operators, Head section, control structure, loop structure, Arrays, concept of pointers, functions, library functions, structure, concept of files.

Input / Output operations.

Simple problem Solving.

PRACTICAL
Full Marks - 30

A. Familiarization with Computer System and Operating System Commands. [10M/10P]

B. Problem Solving Using C Algorithm Design, Coding, Compilation/Linking/Loading (Solving 10/12 Problems) [20M/20P]

CLASS-XII

THEORETICAL
Full Marks—70

A. Fixed and Floating Point Representation of Real Number, Unicode representation of Characters and Strings, Bit Map representation [5M/5P]

B. Sequential Logic Circuits-Flip-Flops, Registers and Counters-Synchronous and Asynchronous Concepts [5M/5P]

C. Manipulation of Data Structure and I/O Files using C-Language [10M/10P]

D. Computer Networking [25M/25P]

Concept of LAN and WAN, Protocols, TCP/IP.

Concept of Internet and Intranet, IP Address, URL.

Dial-up and Leased Line Connection, Band-width.

Internet applications E-mail, Web-browsing, Telnet, FTP etc.

Network Security Concepts.

E. Introduction to DBMS (Relational) [25M/25P]

Record Structure, File Organization and Access Methods.

Concept of keys for data retrieval.

Physical Storage organization.

Basic Concepts of Relational databases.

Normalization (up to 3NF).

Introduction to SQL (exposure to DDL, DML & DCL).

Query Processing and Report generation.

PRACTICAL

Full Marks - 30

Programming for Manipulating Data structures Files [10M/10P]

Interaction with RDBMS and SQL [5M/5P]

Web Interaction [5M/5P]

Project Work and Viva-Voce [10M/15P]

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

COMPUTER APPLICATION

CLASS XI

Full Marks : 100

Theoretical
Full Marks : 70

Brief Review of Computer Hardware [10M/10P]

History of Computer, Computer Generations, Developments in Computer Technology, Block Diagram of Computer System, Input Devices, Output Devices, CPU, Primary & Secondary Memory Systems, CD-ROM, Multimedia Systems

Data Representation [7M/7P]

Review of Number Systems- Binary, Octal, Hexadecimal, Conversion of Binary to decimal, Binary to Octal, Binary to Hexadecimal & Vice-Versa

Topics on Boolean Algebra [7M/7P]

AND, OR, NOT Logic Functions, De Morgan's Theorems, Realization of simple Boolean functions, Universal gates.

Concepts of Computer Software & Languages [15M/15P]

* Importance of Software, System Software Vs Application Software.
* Operating System Overview (Dos & Windows)
* Use of Utility programs-Editor, Compiler, Interpreter
* Programming Languages- Generation of languages, Languages used for problem solving- Scientific, Com-mercial, Data Manipulation, etc, concept of visual language?

Data Processing [16M/15P]

Information & Data, Basic Data types, processing Application

Packages [15M/15P]

Introduction to Word Processing- Invoking MS Word, Create, Edit & Save a document, Cut & Paste- perform operations on blocks of text, headers & footers, Mail merge, Art work, Clipart & drawing tool use. Document Printing, Printer Setup[10M/10P]

Introduction to Power Point- Creating new presentation, Use of Wizards Different fonts & styles, Inserting pictures drawings, saving on Secondary Storage, Slide show, printing etc. [5M/5P]

Practical Paper
Full Marks : 30

Familiarization with Computer system and Peripheraly [7M/7P]

And Peripherals, Media-Floppy Disk CDROM

Study of "My Computer" details

Edit, Copy, Delete Files, Create Directories [7M/7P]

running Programs, Packages, Studying Windows

Features Use of Mouse Buttons, etc

Windows Explorer

Use of Word, Creating Textual document, drawing [10M/10P]

Cut & Paste, Erasing, Copy from different Document, Saving, Mail merge, Printing

Study of Power Point Package [6M/6P]

CLASS XII

Full Marks : 100

Theoretical Paper
Full Marks : 70

Basic Concepts [5M/5P]

Simple Binary Arithmetic, Different methods of negative number representation-1's complement, 2's complement & signed magnitude representation, ASCII codes for Character and Text representation

Logic Functions [5M/5P]

Basic Gates and realization of simple Combinational functions using gates

Data Processing [5M/5P]

Record Structure, Files Organization, Directories/Folders

Computer Networking [20M/20P]

Brief introduction to Networking importance and application areas, Network Structure- different layers;

Networking features of LAN, WAN, Internet & Intranet; Dial-up, and leased line Connections, ISP, URL;

Internet Services- E-mail, Web browsing, Web page design using HTML

Data Base Concepts [20M/20P]

Introduction Access, Concept of Data Base, Table creation & manipulation of data using access facilities, addition of field(s) in a Table, inserting, deleting and updating data, Report Generation

Spreadsheet [15M/15P]

Introduction to Excel, Concepts of Worksheet, Entering data in a Worksheet, Entering labels, values & formulas, Saving a Worksheet, Making charts & graphs, perform calculations and recalculations

Practical Paper
Full Marks : 30

Project Work & Study of Email- [15M/30P]

Project Work

Study of system related to School/town/village/local industries/peoples

i) Using Access creation of Database & preparation of Tables, Data Manipulation and Report generation
Using Excel- Creation of Marks-Sheets, Balance sheets, Monthly/ yearly expenditures reports etc.

ii) Web page design & implementation

Study of Email

Email send/receive, Use of Search Engines

Viva-Voce & Sessional [15M]

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

GEOGRAPHY

CLASS – XI

Full Marks – 100

THEORY
Total Marks – 80

Group – I : ELEMENTS OF PHYSICAL GEOGRAPHY

A. Lithosphere : **[30M/20P]**

i) Endogenous process and resultant landforms :
   (a) folding,
   (b) faulting,
   (c) earthquake and
   (d) volcanic activities.
ii) Exogenous processes and resultant landforms :
   (a) works of ground water and
   (b) works of waves.
iii) Concept of cycle of erosion –
   (a) normal and
   (b) arid.

B. Hydrosphere **[10M/12P]**

(i) Topography of the ocean floor : continental shelf, slope, abyssal plain, ocean deep with special reference to Pacific, Atlantic and Indian Oceans.
(ii) Ocean deposits.
(iii) Salinity and temperature of ocean water.

C. Atmosphere **[15M/18P]**

i) World climatic types with special reference to (a) Equatorial, (b) Monsoon, (c) Mediterranean, (d) Hot Desert and (e) Temperate Grass Lands.
ii) Cyclones – their types and origins; Anticyclones.

Group – II : ECONOMIC GEOGRAPHY :

A) Resources : **[25M/30P]**

a) **Concept of material resources and classification;**
b) **Biotic resources :** 1) Forests – types, global distribution and utilization; 2) Fisheries – inland and marine fisheries; their location and factors affecting their distribution;
c) **Mineral resources :** Classification, world distribution and uses of iron ore, Manganese, copper, bauxite and mica.
d) **Energy resources :** 1) Conventional: distribution and uses of coal, Mineral oil and nuclear power bases of the world; geographical factors favourable for hydel power generation; with suitable Indian examples; 2) Importance of non-conventional sources of energy : Solar, Wind, Tidal, Geo-thermal and Bio-gas.

Practical
Total Marks - 20

1. Scale : **[5M/6P]**

Statement of scales, representative fractions, linear scales, construction of linear scales with primary and secondary divisions, their uses in preparation of maps.

2. Topographical Maps : **[10M/14P]**

Study of conventional signs and interpretation of topographical maps (1: 50000) of plateau regions of India; study of contour lines depicting valleys, spurs and scarps; drawing of cross sections.

3. Laboratory note book and viva-voce: **[3+2=5M]**

CLASS – XII

Full Marks – 100

THEORY
Total Marks – 80

Group – I : Biospher & Physical Environment

A. Biosphere **[15M/15P]**

i) Nature of biosphere, concept of eco-system, energy flow and ecological balance.
ii) **Soil :** weathering and genesis; factors of soil formation; global soil belts.
iii) **Natural Vegetation :** influence of climate on natural vegetation, classification of plants mesophytes, hydrophytes, xerophytes and halophytes with examples from India

B. Physical Environment **[10M/10P]**

i) Concepts and components.
ii) Impact of man on the ecosystem :
(a) pollution of air, water and soil;
(b) deforestation and its impact;
(c) ozone depletion and green house effect.

Group – II : Economic Geography

A. Economic Activities : **[30M/30P]**

a) **Agricultural as primary activity :** Different farming practices – shifting and sedentary, intensive and extensive, subsistence and commercial, mixed farming and market gardening with specific examples.
b) **Industry as secondary activity :**
1) forest based – paper,
2) Agro-based – tea and cotton textile,
3) Mineral based: metal – iron and steel, non-metal – petrochemical with specific examples,
4) Engineering industry – automobile with major Indian examples.

B. Tertiary activity : **[5M/10P]**

Definition, components and importance.

1) **Transport :** relative importance of roads, railways, international waterways and airways in movements of commodities and passengers with specific examples (Descriptive account of different transport systems not required)
2) Forms and relative importance of modern communication systems.
3) **Trade :** importance of international trade; basis and changing patterns.

Group – III : Social Geography :

i) Population : **[12M/10P]**

Global distribution and density, uneven growth, concept of human resource.

ii) Settlement : **[8M/5P]**

Census definition of rural and urban settlements; rural settlement patterns; types and functions of urban settlements; Indian census categories of urban settlements.

PRACTICAL
Total Marks – 20

1. Cartograms : **[6M/10P]**

Construction of line graph, bar graph, flow and star diagram; drawing of isolines – isotherms, isohyets and contours.

2. Meteorological Instruments : **[5M/4P]**

Observing and recording of various weather elements with the help of any two of the following instruments :

i) Six's Minimum and Maximum Thermometer,
ii) Hygrometer,
iii) Fortein's Barometer

3. Field Report and Viva – Voce [7M/6P]

On the basis of local survey on any one of the following themes :

i) Agricultural land use survey of the part of a mouza or

ii) Traffic flow of a road in the vicinity of the institution or

iii) Household survey of a locality (family size / age-sex structure / educational background / occupation).

[Hand written report not to exceed 10 pages inclusive of written text, tables, maps and diagrams in A_4 size paper]

4. Laboratory Note Book : [2M]

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

POLITICAL SCIENCE

CLASS – XI

Total Marks – 100

Group - A

1. Nature of Politics as a social activity : [15M/10P]

Definition & Scope of Political Science – Continuing perspectives in the study of Political Science – Liberalism & Marxism – an outline.

2. State : [15M/15P]

Definition, Nature & Characteristics, Theories of Origin of State (Theory of Divine Origin, Force Theory, Social Contract Theory and Evolutionary Theory)

3. Nationality, Nation & State [8M/10P]

Nation and Nationalism – Right of Self Determination – Nationalism and Internationalism

4. [12M/12P]

a) **Law, Liberty, Equality & Justice** – Basic concepts.

b) **Democracy & Dictatorship** : Meaning and Forms.

Group – B

5. [10M/10P]

a) **Citizen** : Rights and duties of a Citizen – Civil, Social, Political & Economic Rights.

b) **Human Rights** : Nature and distinction between rights & human rights.

6. Framing of India's Constitution – [8M/6P]

a brief outline – Salient features of the Indian Constitution.

7. Forms of Government : [10M/10P]

a) Unitary & Federal – Nature of Indian Federation.

b) Presidential & Parliamentary; Nature of Indian Government – Presidential or Parliamentary ?

8. Fundamental Rights & Duties of an Indian Citizen – Directive Principles of State Policy. [7M/14P]

9. Party System in India : Basic features. [7M/5P]

10. Adult Franchise in India. Election Commission : Composition & Functions. [8M/8P]

CLASS – XII

Total Marks – 100

Group - A

1. Some Key Concepts in International Rerlations : [10M/12P]

a) Power

b) National Interest

c) Non-alignment

d) Globalisation

2. The United Nations – Objectives, Organs and Functions. **[10M/15P]**

The UN and the Peace – keeping process – an outline.

3. Some major political doctrines : (an outline only) **[10M/16P]**

a) Liberalism
b) Marxism
c) Fascism
d) Gandhian Ideas

Group – B

4. Organs of Government : **[10M/6P]**

Executive, Legislature and Judiciary.

5. **[24M/17P]**

a) **Union Executive and Legislature in India**: President and Prime Minister – Power & Position.
b) **Basic features of Union Administration in India**.
Higher Civil Services : UPSC
c) **Indian Parliament** : Composition & Functions.

6. **[10M/10P]**

a) **Indian Judicial System** – an outline of different types of Courts, High Court – Subordinate Judiciary - Lok Adalat.
[10M/10P]
b) **The Supreme Court** : Role, Composition and Functions.

7. **[12M/16P]**

a) **State Legislature** : Composition & Functions.
b) **Structure of State Administration** : State Administration, State Civil Service, State P.S.C., Secretariat & Directorate, District; Subdivision; Block (basic structure)
c) **State Administration** – State Civil Service : State Public Service Commission, Secretariat & Directorate.
d) District; Sub-division; Block (Basic Structure)

8. Local Self Government in West Bengal- Panchayats & Municipalities : **[14M/8P]**

a) Organisation and functions (in the light of the 73rd & 74th Constitutional Amendments)
b) Local Administration in West Bengal District & Block (basic Features)

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

HISTORY

CLASS-XI

Full Marks—100

Group-A
Marks-50

Unit— I : The Colonial Context [5M/5P]

(a) a brief outline of the process of establishment and consolidation of British Power between 1757 – 1857 emphasizing the transformed nature of British imperialism after 1818.
(b) Emergence of a colonial structure of Government [Civil Service, Professions, Army, Police and Judiciary]
(c) The changing structure of Indian economy [drain of wealth, deindustrialisation, land revenue experiments and condition of peasantry, poverty and famines].
(d) Social and cultural policy of the British [social reform measures, spread of English education]

Unit—II : Pre-1857 revolts and civil uprisings[5M/10P]

The Context, Nature and Impact of the 1857 Revolt.
Peasant uprisings in the later half of the 19th Century :
Santhal uprisings, Indigo rebellion (1859 — 1860), Deccan uprising (1875), the Munda movement (1900).

Unit—III : Socio-Cultural awakening in 19th century India [10M/15P]

Raja Rammohan Roy and Bramho Samiji; Derozio & Young Bengal; Prarthana Samaj; Ramkrishna, Vivekananda & Ramkrishna Mission; Theosophical Society & Anne Basant; Dayanda Saraswati & Arya Samaj; Vidyasagar, Jotiba Phule, Narayan Guru, Veeresalingam and social reform movement; Sayyid Ahmed Khan and Aligarh Movement; reform movements amongst Parsis and Sikhs.

Unit—IV : Emergence of organised nationalist politics [15M/15P]

Background to the emergence of organised nationalist politics; early Political Associations in Bengal, Bombay, Madras with particular reference to Surendranath Banerjee, Dadabhai Naoroji, Justice Ranade; establishment of the Indian National Congress in 1885; The Moderate phase of nationalist politics.

Militant Nationalism:
Causes behind the rise of militant nationalism; the Partition of Bengal and Swadeshi movement; role of Tilak, Pal, Aurobindo, Lajpat Rai in the development of militant nationalism; 1907 Surat Split within the Congress; Morley – Minto Reforms and the British 'attempt to rally the Moderates', to its side; militant nationalism and the first phase of revolutionary activities.

Unit—V : Communalism in Indian Politics [10M/5P]

British policy of divide and rule and other factors behind the growth of communalism; establishment of Muslim League (1906); rise of Hindu communalism leading to the establishment of Hindu Mahasabha.

Unit—VI : Growth of modern economy in colonial context [5M/5P]

Introduction of railways; development of modern industry and its social consequences with special reference to the emergence of an industrial labour force.

Group-B
Marks - 50

Unit—I : Age of Revolutions [10M/10P]

A brief outline of
(a) The American War of Independence (1776) causes and results;
(b) The French Revolution (1789); circumstances leading to the Revolution–the achievements of the Constituent Assembly, the Reign of Terror and the period of the Republic; Napoleon Bonaparte and the legacy of the Revolution.
(c) The Industrial Revolution in England and Europe : the emergence of England as the 'first workshop of the world'—the second phase of Industrial Revolution in France, Germany and Russia.

Unit—II The Impact of Nationalism [15M/15P]

(a) The Vienna Settlement of 1815 : nationalism and dissolution of the Metternich system; the 1830 July Revolution and the 1848 February Revolution in France and their impact on Europe; the Second Empire of Louis Napoleon in France.
(b) The importance of 1870 in world history – Unification of Germany and Italy – 19th century nationalism, the emergence of nation-states and the new balance of power in Europe, economic nationalism in Europe.

Unit—III From Empire to World War [10M/10P]

(a) European imperialism and the background to the First World War – reasons for the victory of Allied powers – the Versailles Settlement of 1919.
(b) Attempts for collective security in the inter-war period : the League of Nations-Locarno Treaty – Dawes and Young Plans – Washington Treaties – Kellog-Briand Pact.

Unit—IV The World Between Two Wars [15M/10P]

(a) Background to the Bolshevik Revolution of 1917 – impact of the establishment of the first socialist state on international relations - Lenin and the reconstruction of the Soviet Union.
(b) The USA in the inter-war period : the Republican era (1921-33) : the economic boom; the 1929 economic crash; Roosevelt's New Deal.
(c) Western Europe between the two Wars : Rise of Nazism in Germany and Fascism in Italy; the experience of the Third Republic in France; the experiment of National Government in England.

CLASS-XII

Full Marks—100

Group-A
Marks-50

Unit—I : Impact of the First World War on India [20M/17P]

Economic impact of the First World War on India; emergence of Gandhi in Indian nationalist politics; Champaran, Kaira Kheda and Ahmedabad Satyagrahas; nationalist response to Montagu-Chelmsford Act and Rowlatt Act; the Rowlatt Satyagaraha; Non-Cooperation Movement; First Civil Disobedience Movement; Complete Independence Resolution of 1929; Second Civil Disobedience Movement. Revolutionary nationalism in the post-First World War period.

Unit—II : Last Phase of Indian Freedom Struggle [10M/13P]

Left wing and socialist trends in Indian Politics; Trade Union and Kisan Sabha movement; State people's struggle; 1935 Act and the Ministry period; split within the Congress and the establishment of the Forward Bloc; 1940 Pakistan Resolution and the Pakistan movement; Quit India Movement; Subhas Chandra Bose and the I.N.A.

Unit—III : Prelude to Independence [10M/10P]

Impact of the Second World War on British economy; growing British interest in decolonisation; Post-War upsurge in India; heightened communal tensions in 1946-1947; constitutional negotiations and the Mountabatten Plan; Partition and Independence.

Unit—IV : The Aftermath of Independence [10M/10P]

Constituent Assembly and the birth of the Indian Republic; integration and re-organisation of States; introduction of Planned Economy; the Adoption of the principle of Non-Alignment as the corner stone in Indian Foreign Policy.

Group-B [Marks-50]

Unit—I : The Second World War [10M/12P]

The approach to the Second World War: Agressive nationalism of Germany, Italy and Japan; Failure of the Policy of Appeasement; Breakdown of the system of Collective Security and the League of Nations.

The outbreak of the Second World War: American entry in the war; Hitler's invasion of the Soviet Union and its implications for the course of the War; Causes of the defeat of Axis powers.

Unit—II The Cold War [10M/10P]

Background to the Cold War; Manifestations of Cold War in international relations; especially the Berlin Crisis; the Korean War and the Cuban Missile Crisis; the emergence of the Third World.

Unit—III The Challenge of Communism [10M/10P]

The Communist challenge to world politics : Rise of Communist China and its impact on international relations; Vietnam War and the Defeat of the USA.

Unit—IV The Muddle of the Middle East [5M/5P]

The Middle East in World Politics : Establishment of Israel; Palestine question and Arab nationalism; Egypt under Nasser and the Suez Crisis; Arab-Israeli wars of 1956, 1967 and 1973.

Unit—V : The New World Order [10M/8P]

Post-Stalin era in Soviet Union and its impact on world politics; the politics of detente; disintegration of the Soviet Union and the end of the Cold War; emergence of a new world order.

Unit—X The United Nations [5M/5P]

The United Nations Organisation : the UN Charter and organs of UNO; extent of success of the UNO in international relations.

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

PSYCHOLOGY

CLAS XI

Full Marks – 100

THEORETICAL
Full Marks – 80

Introduction **[5M/5P]**

Subject matter; Development of Psychology as a modern discipline; Fields of Psychology.

Methods of Psychology **[6M/10P]**

Introduction; Goals of Psychological enquiry, Observational, Experimental; Cross—sectional and longitudinal studies; Case Study; Psychological tools—Tests, Interviews, Questionnaires.

Biological bases of behaviour **[10M/10P]**

Introduction; Evolutionary perspective; Neuron—(structure and functions); Brain and Nervous System; Hyper—and hypo-secretion of endocrine system on human behaviour.

Development [5M/5P]

What is development? (Growth, maturation, development, evolution), Critical periods of development. Factors influencing development (Genetic and environment)

Sensory Processes **[8M/10P]**

Introduction, Human senses—Visual, Auditory, Cutaneous, Gustatory, and Olfactory (structure and functions).

Perceptual Processes **[10M/15P]**

Principles of perceptual organization; Perception of distance, depth, and movement; factors determining perception; Illusion. Attention process : Determinants of attention; Features of Attention; Selective attention; Attention and perception.

Learning **[10M/15P]**

Definition; Principles of learning—
(i) Trial and error learning;
(ii) Classical conditioning;
(iii) Instrumental conditioning;
(iv) learning by insight; Process of learning

Memory Processes **[10M/10P]**

(i) Definition (encoding, storage, retrieval);
(ii) Information processing approach; sensory memory; short-term memory, long-term memory;
(iii) Forgetting : Encoding failure, storage failure, retrieval failure; amnesia;
(iv) Improving memory.

Motivation **[8M/5P]**

What is motivation; Human needs: Maslow. Physiological mechanisms : Hypothalamus and motivation

Emotion **[8M/5P]**

Physiology of emotion; external expression of emotion. Emotion and cognition.

PROJECT WORK
Full Marks-20

On any **two** of the following topics [20M/10P]

(i) Sensory and Perceptual processes
(ii) Learning
(iii) Memory
(iv) Motivation

CLASS XII

Full Marks – 100

THEORETICAL
Full Marks-80

Intelligence [10M/10P]

Definition; Nature; Individual difference; Types of Intelligence tests; Intellectual Deficiency; Giftedness

Social Influence and Group Processes [10M/10P]

Introduction; Nature and formation of group; Types of Group; Factors influencing group formation; Influence of group on individual behaviour; Leadership—nature and functions.

Attitude and Social Cognition [8M/8P]

Introduction; Basic idea of Attitude Measurement;Attitude formation; Prejudice and Discrimination.

Personality [8M/8P]

Definition of Personality; Concept of types and traits; Assessment.

Adjustment [6M/7P]

Definition and concept of Adjustment; Factors influencing positive mental health and well-being.

Concept of abnormality [8M/10P]

Criteria of Normality;Concept of neurosis and psychosis; Difference between Neurosis and psychosis.

Psychological Disorders [10M/12P]

Basic account of nature, causes, types and symptoms. Mood disorders; Anxiety disorder; Schizophrenia; Personality disorders; Anti-social; Substance use disorders—drug and alcohol.

Identity Development [6M/10P]

Identity development; Development of gender role; Nature of gender stereotype; Problems of adolescence.

Environment and Behaviour [6M/5P]

Man-environment relationship (physical, psychological, social), concept of ecology, promoting pro-environmental behaviour.

Statistics in Psychology [8M/20P]

What is statistics? Types of statistics—Descriptive and inferential. Graphical representation of data—Bar, Polygon; Histogram. Concept and computation of measures central tendency and variability—Range and Standard deviation; Concept of Normal Distribution curve; Concept of corelation.

PROJECT WORK
Full Marks-20

On any **two** of the following topics [20M/10P]

(i) Intelligence
(ii) Leadership potentials
(iii) Attitude survey
(iv) Personality
(v) Effect of social deprivation on health status of individual

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

SOCIOLOGY

CLASS-XI

Full Marks—100

Unit—I Sociology as an intellectual discipline [25M/25P]

Nature & Scope
Origin & Development
Uses of Sociology
As one of the Social sciences

Unit—II Preliminary Concepts [25M/25P]

Society as structure & Process
Status and Role
Organizations : Formal and informal
Social control : Types and agencies
Culture & Civilization

Unit—III Social Process [10M/10P]

Co operation and conflict : meaning Forms
Accommodation & assimilation : meaning, agents

Unit—IV Social Group [15M/15P]

Typology
Relation between social group and individual

Unit—V Social Institutions [25M/25P]

Marriage, Family, Kinship,
Economy & Polity
Religion & Science
Education

CLASS-XII

Full Marks—100

Unit—I Culture & Formation of Self [25M/25P]

Social Functions of Culture
Socialization & its agents
Heredity versus environment
Deviance & Non-conformity

Unit—II Social stratification [15M/15P]

Types
Caste system : basis, features
Clan system : basis, features

Unit—III Social change [25M/25P]

Meaning and Nature
Factors
Social change in India
Urbanization : meaning, factors responsible
Modernization : meaning, factors responsible
Secularization : meaning, factors responsible

Unit—IV Social Problems in India [20M/20P]

Poverty
Literacy & Education
Status of Women
Environment and Society

Unit—V Methods of Studying Society [15M/15P]

Observation
Case study
Questionnaire.

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

PHILOSOPHY

CLASS XI

Full Marks—100

Western Philosophy [50M/50P]

Nature of Philosophy [2M/2P]

(A general introduction)

Main branches of Philosophy [6M/8P]

Epistemology, Metaphysics, Logic, Ethics, Political Philosophy, Social Philosophy.

Nature of knowledge [4M/4P]

- The different uses of the verb 'to know'.
- Propositional knowledge.
- Necessary and sufficient conditions of propositional knowledge.

Theories of knowledge [14M/9P]

- Rationalism :
  (i) Moderate Rationalism,
  (ii) Extreme Rationalism,
  (iii) Main theses of Rationalism – Evaluation of the theory.
- Empiricism :
  (i) Moderate Empiricism,
  (ii) Extreme Empiricism,
  (iii) Main theses of Empiricism – Evaluation of the theory.

Substance [6M/9P]

- (i) Commonsense notion of substance.
  (ii) The different meanings of 'substance' given by Aristotle.
- The Rationalist view of substance : The views of (i) Descartes, (ii) Spinoza, (iii) Leibnitz—Evaluation.
- The Empiricist view of substance : The views of (i) Locke, (ii) Berkeley, (iii) Hume – Evaluation.

Causality [6M/8P]

- Commonsense notion of causal relation.
- The Rationalist view of causal relation :
  (i) The nature of the relation of entailment.
  (ii) Causal relation as the relation of entailment.
- The Empiricist view of causal relation :
  Hume's theory : (i) Denial of necessary connection between cause and effect.
  (ii) Causality as constant conjunction and regular succession.
- (i) Evaluation of the Rationalist view of causal relation.
  (ii) Evaluation of Hume's theory.

Realism [6M/5P]

- (i) Main theses of Realism.
  (ii) Naive Realism – its main tenets Examination of the view.
- (i) Representative Realism – its main tenets – examination of the view.

Idealism [6M/5P]

(i) Main theses of Idealism.
(ii) Berkeley's Idealism – Esse est percipi – examination of the view.

Indian Philosophy [50M/50P]

Introduction [14M/12P]

Meaning of the term 'Darśana'

(i) The different schools of Indian Philosophy – the āstikas and the nāstikas.

(ii) Some basic concepts
 (a) Pramaṇa,
 (b) Prameya,
 (c) Pramāta,
 (d) Pramā,
 (e) Mokṣa
 (f) Law of Karma and rebirth.

The Philosophy of Cārvāka

(i) Cārvāka epistemology :
 (a) Pratyakṣa as the only pramāna.
 (b) Refutation of anumāna and śabda pramāna.

(ii) Cārvāka Metaphysics :
 Materialism – Four different physical elements accepted by the Cārvākas. Svabhavavāda, Yadricchāvāda, Dehatmavāda, Bhutācaitanyavāda. Rejection of the doctrine of Karma and rebirth. Rejection of God as the creator of the world – evaluation of Cārvāka metaphysics.

Buddhism [12M/12P]

(i) The main tenets of Buddhism :
 (a) Four noble truths,
 (b) Pratītyasamutpādāvāda,
 (c) Karmavāda,
 (d) Kṣaṇikavāda.

(ii) Names of the four schools of Buddhism

(iii) Detailed account of the Vaibhāṣika school and the Sautrantika school.

(iv) The difference between the Vaibhāṣika school and the Sautrāntika school.

Nyāya Philosophy [12M/14P]

Section – A

(i) The different pramānas accepted by the Nyāya school, Definition of pratyaksa.

(ii) Introducing the different types of sannikarṣa – laukika and alaukika sannikarṣas. Detailed account of different types of laukika sannikarṣa.

(iii) Distinction in brief between savikalpaka pratyaksa and Nirvikalpaka pratyakṣa.

Section – B

Definition of anumiti, Concepts of paksa, sādhya and hetu, Vyāpti as Sahacāra niyama, Nature of Vyāpti, Vyāptigraha, Parāmarśa,
Distinction between svārthānumiti and parārthānumiti,
Pancāvayavāvākya — the function of each avayava.

Vaiśeṣika Philosophy [12M/12P]

Names of the categories accepted by the Vaiśeṣika philosophers, The catagory of Dravya and its different kinds, Perception of dravya, The category of Guna and its different kinds, Perception of colour, Perception of taste, Perception of smell, Perception of touch, Perception of sound.

CLASS XII

Full Marks—100

Deductive Philosophy [60M/60P]

Argument [4M/6P]

Nature of Argument. Distinction between deductive argument and inductive argument with illustrations. Argument and form of argument. Validity of arguments. Validity and truth. Invalidity of argument. Invalidity and truth.

Proposition [8M/10P]

Sentence and proposition. Classification of Propositions according to (i) Quality, (ii) Quantity and (iii) Relation. Four-fold scheme of categorical propositions. Proposition and its form.

Distribution of terms. Rules for translating categorical propositions into standard form.

Opposition of Propositions [6M/8P]

Kinds of opposition of propositions. Square of opposition. Inference by opposition. Laws of different types of opposition.

Immediate Inference [12M/9P]

Classification of Inference into Immediate and Mediate. Conversion as a form of Immediate Inference. Rules of Conversion. Simple Conversion. Conversion by Limitation. Obversion as a form of immediate inference. Rules of Obversion. Joint Application of Conversion and Obversion.

Categorical Syllogism [16M/16P]

Characteristics of Categorical Syllogism. Structure of Categorical Syllogism. Figures of Syllogism. Moods of Syllogism. General Rules of Syllogism. Testing Syllogism for Validity. Theorems and Problems concerning Syllogism. Fallacies – Illicit Major, Illicit Minor, Undistributed Middle. Fallacy of Four Terms (ambiguous terms excluded)

Disjunctive and Hypothetical Syllogism [8M/5P]

Compound Arguments. Hypothetical – Categorical Syllogism. Rules of Hypothetical – Categorical Syllogism. Testing Hypothetical – Categorical Syllogism for Validity. Disjunctive – Categorical Syllogism. Rules of Disjunctive Categorical Syllogism. Testing Disjunctive – Categorical Syllogism for Validity.

Truth Functions [6M/6P]

Negation, Conjunction, Disjunction, Material Implication and Material Equivalence — Truth table Method for testing argument forms. [Premises and conclusion not to contain more than 2 variables]

Inductive Philosophy [40M/40P]

Nature of Induction [6M/7P]

Distinguishing marks of Induction; Scientific and Unscientific Induction; Analogy and Analogical argument; Appraising Analogical arguments; Definition and form of Simple Enumeration; Evaluation of Simple Enumeration as a type of induction.

Cause [10M/7P]

The meaning of "Cause", "Cause" as necessary condition; "Cause" as sufficient condition; "Cause" as necessary and sufficient condition – Exposition and illustration; Doctrine of Plurality of causes – Evaluation of the view.

Mills Methods of Experimental Enquiry [12M/14P]

Principle of Elimination; Method of Agreement; Method of Difference; Joint Method of Agreement and Difference; Method of Concomitant Variation; Canon of these methods; Exposition of the methods with Symbolic and Concrete illustrations; Advantages and disadvantages of each method; Hints for identifying the method applied in a particular case and evaluating the application of the methods.

Inductive Fallacies : [12M/12P]

Bad Analogy; Illicit Generalisation; Taking an irrelevant factor as a cause; Taking co-effects of the same cause as cause of one another; Post hoc ergo propter hoc; Taking a necessary condition as the whole cause; (Adequate illustrative materials to be given).

EDUCATION

CLASS XI

Full Marks – 100

Definitions of Education **[6M/6P]**

General views in respect of defintions of education—Education as a process and a product.

Objectives of Education **[10M/10P]**

Four fundamental types of Learning :
— Learning to know
— Learning to do
— Learning to live together
— Learning to be

Forms of Education **[16M/18P]**

Informal education : Family, Social Institutions, Mass media, Centers of productive and economic activities

Non-formal Education : Distance Education, Open Education and different types of non-formal schooling.

Formal Education : School

Education for National Integration and International Understanding. **[8M/6P]**

— Concept, factors and significance.

Curriculum **[12M/10P]**

(a) Definition as a means to achieve the purpose of education.
(b) Principles of curriculum construction with special reference to :
 (i) Purpose of education,
 (ii) Needs and capacities of the educand and
 (iii) Availability of the resources.

Co-curricular activities : Definition, types and importance. **[4M/4P]**

Educational Psychology **[4M/4P]**

— Definition
— Relationship between Education and Psychology

Knowing process **[8M/8P]**

— Sensation
— Perception
— Conception

Learning **[12M/12P]**

(a) Definition of Learning.
(b) Stages of Learning : Retention Recall—Recognition.
(c) Factors of Learning :
 (i) maturation,
 (ii) interest,
 (iii) attention
 (iv) abilities.

Special features of the development of institutionalized Education in India **[8M/10P]**

— Ancient Period
— Medieval Period

Importance of Universal Literacy for National Development **[6M/4P]**

— achievement and Problems.

Environmental Education for Preservation of Culture and Heritage. **[6M/5P]**

CLASS XII

Full Marks – 100

Aims of Education :—Education for [10M/10P]

— Individual development
— Social development
— National development

Abilities [6M/6P]

Spearman's Two Factor Theory and Thurstone's Group Factor Theory

Mechanism of Learning [8M/8P]

(i) Conditioning (Classical and Operant)
(ii) Problem solving (Trial and Error)

Educational Statistics [12M/12P]

(i) Tabulation of data
(ii) Frequency distribution
(iii) Graphical representation (Frequency Polygon and Histogram)
(iv) Measurers of central tendency and uses

Stages of Human Development and corresponding levels of education [12M/10P]

Characteristics of :
(i) Infancy and Pre Primary education
(ii) Childhood and Primary education
(iii) Adolescence and Secondary and Higher Secondary Education

General, Vocational and Technical Education [10M/8P]

Meaning, Concept and Scope of :
(i) General Education
(ii) Vocational and Technical Education

Education for physically challenged children [12M/14P]

—Meaning and types
—Education for Visually impaired
—Education for Deaf and Dumb

Development of Education in Modern periods (Rammohan to Gandhi) [15M/15P]

— Rammohan Roy—a social reformer and precursor of education in India.
— Iswar Chandra Vidyasagar—A multifaceted contributor toward expansion and improvement of quality education.
— Rabindra Nath Tagore's contribution toward theory and practice of education.
— Vivekananda's views on Education.
— Gandhiji's views on education as depicted in 'Nai Talim'

Education of India after independence [10M/10P]

— Status of Education in the Indian Constitution.
— The Indian Education Commission (1964-1966)-Objectives and Structure of Preschool and School Education.
— NEP (1986 as reviewed in 1992)—basic features

Relevance of Computer Technology to the Students, Teachers in the development, expansion and quality improvement in Education. [5M/6P]

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

ACCOUNTANCY

CLASS XI

Full marks – 100

1. Introduction to Accountancy [8M/14P]

(a) **Nature and Scope of Accountancy:** Aims and Objectives; Branches of Accounting—Financial Accounting—Cost Accounting — Management Accounting; Brief History of Evolution of Accoutancy.

(b) **Important terms in Accountancy :** Only definitions and examples if necessary: Transaction, Capital, Drawing, Assets, Liabilities, Receipts, Payments, Income, Expenditure, Expenses, Gains, Losses, Goods, Purchases, Import, Sales, Export, Return Inward, Return Outward, Freight, Carriage, Stock, Amount Receivable, Debtors, Bad Debt, Amount Payable, Creditors, Bills Receivable, Bills Payable, Investment, Discount, Trade Discount, Cash Discount.

(c) **Business Financial Statement and Accounting Concepts and Accounting Conventions :** Balance Sheet, Profit & Loss Account and other Financial Statements; Basic Assumptions underlying Financial Statement—Entity Concept—Continuity Concept—Going Concern Concept—Accounting Period Concept; Periodical Accounting; Concept of Capital and Revenue; Users of Financial Statement.

(d) **Accounting Information and Accounting Standards :** Accounting Information—Characteristics—Users of Accounting information, Accounting Information and Decision-marking; Accounting Standards—Meaning—Purposes. [elementary level discussion]

2. Accounting Cycle and Double Entry Book-keeping [10M/20P]

Interpretation of Accounting Cycles—Definition and Classification of Accounts—Rules for Debiting and Crediting—The Basic Accounting Equation—Concept of Debit, Credit and Duality—Nature of Transactions—Journalising the Transactions—Posting of Transactions in Ledger Accounts—Balancing of Accounts; Special Journals *i.e*; Day Books—Purchases Day Book—Sales Day Book—Purchases Return or Return Outward Book—Sales Return or Return Inward Book—Debit note—Credit Note—Bills Receivable Book—Bills Payable Book—Journal Proper.

3. Accounting for Cash [16M/20P]

Preparation of Cash Book—Single Column—Double Column—Triple Column—Petty Cash Book—Multi-column Cash Book—Bank Reconciliation Statement—Preparation of Bank Reconciliation Statement before amendment of Cash Book and after amendment of Cash Book—Preparation of Bank Reconciliation by comparing Cash Book and Pass Book : (a) When Cash Book and Pass Book for a Particular period of time are given, (b) When Cash Book/Pass Book of a particular period is given and Pass Book/ Cash Book of the Preceeding period is also given.

4. Accounting for Bills of Exchange [8M/9P]

Bill of Exchange—Features-Parties—Advantages—Types of Bills—Endorsement—Discounting Bills—Honour and

Dishonour of Bills—Accommodation Bills—Average Due Date and Account Current—Methods of ascertaining the Average Due Date—Preparation of Account Current.

5. From Trial Balance to Financial Statement [20M/7P]

Preparation of Trial Balance—Features and Utilities of Trial Balance—Is Trial Balance a Ledger Account—Limitation of a Trial Balance—Error detected by a Trial Balance—Error not detected by Trial Balance—Step to detect erros through a Trial Balance.

6. Terminable Venture [10M/7P]

Features—Differences between Venture Accounting and Periodical Accounting—Differences beweeen a Terminable Venture and a Going Concern—Ascertainment of Profit or Loss of a Single Venture only.

7. Farm Accounting : (*Agricultural Farm, Dairy Farm, Fisher Farm and Poultry Farm*) [8M/5P]

Features of Farm Accounting—Objectives of Farm Accounting—Recording of Transactions—Usual Heads of Income and Expenses of Farms.

8. Elements of Cost Accounting [12M/10P]

Meaning of Cost—Elements of Cost—Materials, Labour, and Overheads and Preparation of cost Sheet.

[12M/10P]

9. Accounting in Computerised Environment [8M/8P]

Meaning-Need for Computerised Accounting—Limitations of Compu-terised Accounting—Manual Accounting vs Computerised Accounting.

CLASS XII

Full marks – 100

1. Reserves and Provisions [8M/6P]

Various types of Reserves and Provisions—Reserve vs Provision—Provision for Bad and Doubtful Debts—Provision for Discount on Debtors and Creditors.

2. Depreciation Accounting [8M/5P]

Causes of Depreciation—Causes of Providing Depreciation—Methods of Depreciation (Straight Line Method and Diminishing Balance Method only)—Accounting Treatments.

3. From Trial Balance to Financial Statement-II [24M/25P]

Year end Adjustments for Accruals—Prepayment and Pre-received; valuation of Stock-Rawmaterials, work-in-progress and Finished Goods; Capital and Revenue Expenditure; Adjustment Entries; Preparation of Final Accounts of a propritory concern-Manufacturing Account-Trading Account and Profit & Loss Account - Balance Sheet - Classification of Assets and Liabilities - Marshalling of Assets and Liabilities.

4. Final Accounts from Incomplete Records [12M/8P]

Preparation of Statement of Affairs—Prepartion of Trading and Profit & Loss Account and Balance Sheet.

5. Final Accounts of Non-profit Entities [12M/10P]

Preparation of Receipts & Payments Account, Income & Expenditure Account and Statement of Affairs/Balance Sheet of Club, Library, Society, School, Hospital.

6. Rectification of Errors [8M/7P]

Types of Errors in Accounting—Suspense Account and Profit & Loss Adjustment Account—Rectifications : Before Preparation of Trial Balance—After preparation of Trial Balance—After preparation of Final Accounts.

7. Partnership Accounts [8M/8P]

Nature of Partnership—Sharing of Profit and Loss—Profit & Loss Appropriation Account—Differences between Profit & Loss Account and Profit & Loss Appropriation Account—Differences between Charge against Profit and Appropriation of profit—Fixed Capital Accounts and Current Accounts—Fluctuating Capital Account.

8. Company Accounts (*elementary aspect only*) : [12M/16P]

Company Capital (Debit & Equity Capital) Account—for Company Capital — Issue—Forfeiture and Re issue of Shares—Proforma of Company Balance Sheet only (Section 211 and Schedule VI Companies Act, 1956)

9. Analysis and Interpretation of Financial Statements [8M/15P]

Concept of Accounting Ratios and their Applications : Measurement of Liquidity & Solvency—Current Ratio Liquidity Ratio and Debt Equity Ratio—Measurement of Performance—Capital Employed—Determination of Capital Employed—Return on Capital Employed.

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

BUSINESS ORGANISATION AND MANAGEMENT

CLASS XI

Full Marks – 100

UNIT- I [10m/7P]

Business : Meaning, definition, basic features, difference between business and profession.
Business activities classified : Industry, trade and commerce — their inter-relationship.

UNIT- II [10m/7P]

Objectives of business : Nature and importance of objectives, multiple objectives, primary and secondary objectives, need for balancing the multiple objectives.
Social responsibility of business : concept, case for social responsibility and human rights, responsibility towards different interest groups like owners and investors.

UNIT- III [10m/12P]

Business organisation : Meaning, importance, steps in setting up a business organisation, personal and impersonal aspects, concept of separate entity.
Scale of business : Large, medium and small scale business, factors influencing the size, roles of large, medium and small scale industries (including cottage industry) in Indian economy.

UNIT- IV [20m/22P]

Private sector—broad and general ideas with reference to (a) ownership and control, (b) legal status, (c) capital, (d) management, (e) stability, (f) risk and liability, (g) entitlement to profit.

(i) Sole proprietorship,
(ii) Partnership—registered and unregistered,
(iii) Company—public and private, Memorandum and Articles of Association,
(iv) Co-operatives—objectives, different types.

UNIT- V [15m/14P]

Industry : Primary, secondary and tertiary.
Purchase and sale : Essential aspects of a buying and selling transaction in case of goods as well as services, market—importance and types, general concept of global market, domestic market, consumer market and business market, services and limitations of functional and merchant middleman.

UNIT- VI [10m/16P]

Trade : Home trade, wholesale trade, retail trade, large scale retailing—features, advantages and limitations of (a) chain store, (b) multiple shop, (c) departmental store, (d) super market. Hire purchase and instalment system.
Foreign trade : Characteristics, basis of foreign trade, different types of importers and exporters, general procedure of import and export including recent changes in India

UNIT- VII [15m/12P]

Capital : meaning, functions, types and forms of business capital, owned capital and borrowed capital.
Profit : various meaning of profit in business, economics and taxation, profit earning vs. profiteering.
Turnover : Turnover of capital, its relationship with business performance and growth

UNIT- VIII [10m/10P]

Market : General concept of domestic market, global market, consumer market and business market.
Organised market : Capital market, money market, commodity market—nature, importance, objectives and functions (elementary ideas).

CLASS XII

Full Marks – 100

UNIT- I **[10m/8P]**

Business economy and society : their interrelationship, sectors in economy—public, private and joint sectors (elementary level).
Environment of business : Elements of environment, need for identifying environmental facilities and constraints, features of Indian business environment (basic ideas).

UNIT- II **[15m/16P]**

Government and business : Relationship between government and business, objectives and rationale of government control, nature and type of government control, government as promoter, regulator and arbitrator.
Public sector—(i) Departmental and Board, (ii) Corporation, (iii) Company—features, suitability for different purposes, autonomy and public accountability.
Joint Venture—features, government policy.

UNIT- III **[10m/7P]**

Business combination : Definition, causes, types and forms, combination in India, government policy
E-Commerce : Meaning, opportunities and benefits.

UNIT- IV **[15m/20P]**

Banks : Different types, importance, functions and services of banks to business, loans and advances, different types of accounts, negotiable instruments—cheques, drafts, bills etc., crossings and its implication.
Insurance : Meaning, importance, types—life and general, basic principles—insurable interest, utmost good faith and indemnity, general insurance policies, procedure of taking out policies and settings claims.

UNIT- V **[10m/12P]**

Transport : Functions, importance, different modes—Railways, inland water-ways, sea and air, their features, advantages and limitations, factors determining the selection of a mode of transport.
Publicity : Advertising — objectives, advantages and limitations, misuse, media, factors determining the choice of media, other method of sales promotion including salesmanship, role and technique of salesmanship.

UNIT- VI **[20m/15P]**

Management : Definition, objectives and importance, principles.
Management as an activity, process, discipline and as a group, as a science, as an art and as a profession.
Management and administrations : Different views on the usage of the terms.
Management functions : Planning, organising, directing and controlling—concept and basic features.

UNIT- VII **[10m/8P]**

Office Management : Meaning of office, importance, evolution of the modern office.
Functions of an office, activities in a business office, major departments.
Office services : Secretarial support, record management, handling of mail—incoming and outgoing, control of stationary, reception.
Common office applications and their use, computer in office functions.

UNIT- VIII **[10m/14P]**

Business letters : Characteristics and types.
Drafting of business letters :
(a) Enquiries, offers, quotations and orders.
(b) Confirmation, execution, refusal and cancellation of orders.
(c) Status enquiry and reply.
(d) Collection of dues from debtors.
(c) Agency.

Meetings : Requirements of a valid meeting—notice, agenda, quorum, chairman, minutes and confirmation.

CLASS XI

Full Marks – 100
(Business Economics- 75 &
Business Mathematics – 25)

Group A (Business Economics)

1. Nature and Purpose of Business Economics [10M/10P]

Nature and functions of the economic system – the units of the economic system and their goals of optimisation. The business firm – its functions; performance of the firm. The concept of optimisation as used in the context of other economic units like consumer and factors of production.

Definition of Business Economics – an analytical method aimed at providing the management staff of the business to take meaningful decisions for their business. Business Economics and Economic Theory – their relationship. Application-oriented nature of Business Economics – Importance of quantification of economic information – use of Mathematics in Business Economics.

2. Elementary Theory of Consumer Behaviour [30M/25P]

The consumer as the purchaser and user of the product of the firm.

Nature of the demand schedule – the marginal utility approach – Law of Diminishing Marginal Utility – marginal utility and price.

Consumer demand – concept – the Law of Demand – the demand curve – its slope – the effects of changes of price on quantity demanded — factors affecting the changes in demand for a commodity - the change in quantity demanded and the shifts in the demand curve.

Elasticity – concept about different types of elasticity; Elasticity of demand – concepts of income, price and cross elasticities – measurement of elasticity (mainly by geometrical approach) – classification of the segments of the demand schedule on the basis of elasticity – determinants of elasticity – application of the concept (i.e. classification of commodities according to different types of elasticity) – relationship between elasticity and diminishing marginal utility.

Revenue schedules – the concepts of total, average and marginal revenues; their relationship with elasticity.

3. Elementary Theory of Production [25M/25P]

Factors of production – land, labour, capital and organisation – the nature and specialities of each factor of production (No detailed discussion required). Concepts like division of labour, capital formation, role of entrepreneur.

Forms of business units: single ownership – partnership – joint stock company – holding company – cooperative organisation – state owned firm (No detailed discussion required).

Scale of production – concept of indivisibility of factors – internal and external economies of scale – limits to the expansion of the business firm – advantages of small scale production.

Relationship between inputs and output – Laws of Variable Proportions and Returns to Scale.

Nature and behaviour of costs – adjustability of costs to changes in output – determinants of costs- concept of fixed and variable costs.

Cost schedules – concepts of total, average and marginal costs as applicable to short and long run cost functions – assumptions and their significance.

4. The Business Firm in the Economy (I) **[10M/10P]**

National Income – concept of circular flow of income – linkage between the households and the firm – measurement of national income both by income and product method – concepts of double counting and value-added.

Concept of consumption, savings and investment.

Group B (Business Mathematics)

1. Algebra **[12M/17P]**

Statements of the Laws of Indices; Logarithm.Simple problems;

Variation: Direct and Inverse Variation. Statement of the Theorem of Joint Variation. Simple Problems.

Progressions: Definitions of Arithmetic, Geometric and Harmonic Progressions, with examples. Formula for the n-th term and the sum to n terms of a series in Arithmetic Progression and Geometric Progression. Arithmetic and Geometric mean of two numbers. Simple problems, sum of n-natural numbers, sums of their squares and cubes.

Quadratic Equations: Solution of two simultaneous equations - one quadratic, one linear or both quadratic. Simple idea of the complex number of the form $a + ib$, $i=\sqrt{-1}$. Roots of a quadratic equation. Relation between roots and coefficients.

2. Co-ordinate Geometry **[10M/10P]**

Rectangular Cartesian Co-ordinates. Distance between two points. Co-ordinates of the point of section of a finite segment in a given ratio. Simple problems.

Equations of a straight line in the forms

$\frac{x}{a}+\frac{y}{b}=1$, $y=mx+c$, $y-y_1=\frac{y_1-y_2}{x_1-x_2}(x-x_1)$, $ax+by+c=0$. (Need not establish the results). Meaning of the constants involved. Points of intersection of two straight lines. Simple problems.

3. Differential Calculus **[3M/3P]**

Functions of a single variable. Dependent and independent variables. Graphical representations of algebraic functions of the form xn. (n is a positive integer ≤ 3).

CLASS XII

Full Marks – 100
(Business Economics- 75 & Business Mathematics – 25)

Group A (Business Economics)

1. The Market **[20M/20P]**

Sale decisions of the firm.

Market morphology : determinants of different forms of the market.

Perfect competition : assumptions-nature of price determination by the firm and in the market – output and price in the short run – adjustment of the market price in the long run.

Monopoly : determination of price and output in the short run- power of a monopolist – concept of price discrimina-tion (derivation of equilibrium not required).

2. Determination of Factor Prices **[20M/20P]**

Purchase decision of the firm : the general concept of factor price determination – marginal productivity theory.

Rent : traditional and modern theories of rent (no detailed discussion required) – rent and price – quasi rent.

Wages : distinction between real and nominal wage – relative wage – wage differential– role of trade unions in determination of wage.

Interest : Gross and net interest – the market rate of interest – marginal productivity theory.

Profit : nature and determinants of profit – normal profit – balance sheet view of profit – income, expenditure and profit – historical versus anticipated profit – estimation of anticipated profit.

2. The Business Firm in the Economy (II) [35M/35P]

Money : its nature and functions – Quantity theory of money by Fisher – value of money – relationship between money and price – Price Index Numbers.

Banking : Kinds of banks – commercial, development and central – their functions – credit creations and its limitations. Ideas about other non-banking financial institutions.

The role of the government : concept of private versus public expenditure – government budget – sources of revenue for the government – tax and non-tax sources. Concept of cannons of taxation –nature of taxation: progressive, proportional and regressive taxation – direct and indirect taxes – their relative merits and demerits; Concept of different types of deficit; Concept of public debts.

The open economy : international trade – its basis, advantages and disadvantages - terms of trade – concepts of balance of trade and balance of payment – equilibrium; Correction of disequilibria – policies of export promotion and import substitution; Concept of globalisation --IMF, IBRD (World Bank) and WTO.

Group B (Business Mathematics)

1. Algebra [13M/15P]

Nature of the roots of a quadratic equation. Simple problems. Quadratic inequation of the form $ax^2+bx+c>$or <0 and their solution set.

Simple problems of permutation and combination.

Statement of Binomial Theorem and simple application.

Simple idea of convergence and divergence in relation to infinite series in G.P. and infinite Binomial series.

2. Differential Calculus [12M/10P]

Elementary ideas of limit and continuity. Geometrical approach.

Derivatives: Definition, derivative of constant and algebraic functions. Derivative as rate-measurer. Simple problems. Mechanical idea of second order derivative. Maxima and minima of simple algebraic functions. (Use of derivatives of first and second order).

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

ECONOMIC GEOGRAPHY

CLASS XI

Full Marks-100

Group A [60 marks]
General

1. Introduction **[10M/11P]**

a) (i) *Economic geography* – meaning and scope; (ii) Relation of economic geography with other branches of geography; (iii) Importance of the study of economic geography.

b) ***Major types of economic activities*** (meaning and nature): (i) Primary; (ii) Secondary; (iii) Tertiary.

c) ***Environment and economic activities***: (i) Physical environment; (ii) Non-physical environment; (iii) Effects of environment on the economic life.

2. Resource **[10M/11P]**

(i) Meaning and definition; (ii) Resource creating factors; (iii) Functional concept of resource (dynamic nature); (iv) Types of resource; (v) Modern trends in resource development; (vi) Sustainable deve-lopment – concept, needs and guidelines.

3. Principal natural resources of the world and their utilisation **[15M/14P]**

a) *Forest:* (i) Importance of forest; (ii) Types of forest and their utilisation; (iii) Forest conservation; (iv) Social forestry and agro – forestry.

b) *Marine resource*: (i) Economic significance of sea; (ii) Important marine fisheries of the world.

c) *Animal resource*: Cattle and sheep rearing and principal products.

4 Agriculture **[15M/11P]**

(i) Importance of agriculture as an economic activity; (ii) Factors affecting cultivability of land; (iii) Major crops (uses, principal growing areas and trade): rice, wheat, tea, coffee, sugarcane & sugar beet, cotton, jute, rubber.

5. Transport and Ports & Harbours **[10M/13P]**

a) ***Transport :*** (i) Importance; (ii) Modes of modern transport (roadways, railways, waterways and airways) (iii) Trans – continental railways; (iv) Suez Canal and Panama Canal.

b) ***Ports and harbours :*** (i) Functions; (ii) Relation with hinterland (iii) Required conditions for development. (iv) Some important ports of international standing - New York, Amsterdam, London, Hambourg, Singapore and Colombo.

Group B - [40 marks]
India

1. Economic utilisation of natural resources in India **[15M/11P]**

a) ***Forest resource***: Economic importance of Indian forests; major types of forest; forest conservation in India.

b) ***Animal resource***: Cattle, goat and sheep rearing and principal products; importance of animal resources in Indian economy.

c) ***Fishing***: Types of fishing — inland fishing and marine fishing; fish production and trade; reasons for the underdevelopment of marine fishing; measures for the development of fishing.

2. Agriculture **[15M/18P]**

Importance of agriculture in Indian economy; major types of soil in India and their influences on crop production; problems of soil erosion and measures for soil conservation in India; problems of Indian agriculture and measures

adopted for its improvement; irrigation systems in India; major crops — rice, wheat, cotton, jute, sugarcane, tea, coffee, rubber, oilseeds.

3. Transport and Ports [10M/11P]

a) *Transport* : Railways, road transport, water transport and air transport.
b) *Ports* : Major ports of India and their hinterlands.

CLASSXII

FullMarks - 100

Group A - 45 marks

General

1. Population [10M/8P]

(i) Man-land ratio and population density; (ii) Distribution of population; (iii) Population growth – recent trends; (iv) Impact of population growth on economic development; (v) Concept of optimum population; (vi) Population structure (age-sex pyramid).

2. Minerals and energy resources [15M/17P]

a) Minerals: (i) Principal minerals, their uses and major producing areas: metals — iron ores, manganese, copper, bauxite, tin, zinc and lead. Non-metals—salt and mica.
b) *Energy resources*: (i) *Conventional* — Coal, petroleum: uses, producing areas and trade; natural gas, hydropower (uses and producing areas). ii) *Non-conventional* sources of energy — solar, wind, tidal.

3. Manufacturing industry [15M/11P]

(i) Factors for industrial development; (ii) Weber's theory of industrial location; (iii) Iron & steel industry; (iv) Textile industries (cotton, woolen, synthetics); (v) Paper industry.

4. Trade [5M/5P]

(i) Trade as an index of economic development (ii) Bases of international trade; (iii) WTO and its major functions; (iv) Major trading blocs of the world.

Group B - 45 marks

India

1. Influence of physical environment on economic activities in India [5M/6P]

Influence of landform; influence of rivers; influence of climate.

2. Population [10M/7P]

Growth of population — recent trends; distribution pattern of population; population characteristics; problems related to high growth of population and remedial measures.

3. Energy and mineral resources [10M/14P]

a) *Energy resource*: Coal; petroleum; hydropower; non-conventional sources of energy.
b) *Mineral resource:* Selected mineral resources, their uses and distribution — iron ores, manganese, bauxite, copper and mica.

4. Manufacturing industries [15M/12P]

Iron and steel; cotton textile; jute; paper; sugar; chemical fertilizers; cement; petro-chemicals.

5. Foreign trade [5M/5P]

Recent trend in India's foreign trade and present position; trade relation with SAARC countries.

Group C - 10 marks

West Bengal

1. Economic geography of West Bengal [10M/15P]

Agricultural resources; fishing; minerals; power resources; major industries and industrial regions; Kolkata port and its significance.

HOME MANAGEMENT & HOME NURSING

CLASS XI

Full marks – 100

Theory
Full marks – 80

A) Physiology and Human Body and Hygiene [10M/10P]

1) Elementary knowledge of Human Body Systems
2) Hygiene (a) Air—its composition, impurities and ventilation
3) Household cleaning including furniture and equipment
4) Study of household pests.

B) Providing First Aid at Home [10M/12P]

1) What is First Aid ? Where it is applied?
2) Simple bandaging
3) Storage of poisonous medicines at home
4) Maintaining a First Aid Box.
5) Rendering First Aid in case of an accident, sprains, fractures, pains, cuts, bleeding, burning, foreign body, bites, stings, fits, fainting.

C) Care of Sick at Home [10M/10P]

1) Basic Principles of Home Nursing
2) General care of the patient
   a) Selection and care of the sickroom
   b) Nursing of patient at different age group levels—child, adult and old.
   c) Administration of food and drugs to a patient.

D) Home Maker as a Home Nurse [10M/12P]

1) Qualification of a good nurse and her duties.
2) The sickroom—choice of the room and its arrangement.
3) Bedmaking with and without a patient.
4) Home management and family health
   i) Medical care of mothers and infants.
   ii) Immunisation and dental care of children.
   iii) Recognising symptoms of illness at home
   iv) Care of old and infirm at home.

E) Common Household Diseases [10M/8P]

1) Common household diseases
2) Elementary knowledge of symptoms of infectious diseases.
3) Preventive Measures : a) Early diagnosis (b) Isolation, (c) Notification, (d) Quarrantine, (e) Disinfection (concurrent and terminal), (f) Immnunisation (h) Health Education

F) Knowing the Fibres for the Family [10M/6P]

1) Study of different kinds of textile fibres.
2) Different methods of washing and finishing materials of different fibres.

G) Selecting Fibres for the Family [10M/6P]

1) Knowledge of fabrics
2) Management responsibilities in clothing a family.
3) Different methods of washing and cleaning of clothing including dry cleaning and removal of stains.

H) The Art of Good Grooming and the Home Maker [10M/12P]

1) Ctothing its needs and purposes
2) Choice of clothes for different occasions according to age, sex, occupation and seasonal variation.
3) Selection of fabrics with emphasis on beauty, comfort, washability, durability and case of handling.
4) Care of clothes.

Practical
Full Marks - 20

1) Prepare simple cleaning articles and equipment in the laboratory.
2) Preparing simple household polishes for wood, metal, glass and leather etc. in the laboratory.
3) Basic principles of whitewashing and distempering of walls.
4) Demonstration of different methods of washing and finishing of various types of fabrics in the laboratory.
5) Preparing temperature charts and patients daily report.
6) Arrangement of sickroom.
7) Simple method of preparing garment for children—any two garments by using decorative stitches.
8) Removal of stains—principles and practice in the laboratory.
9) Principles of simple method of dyeing and printing textiles in the laboratory.

Seminar and Group Discussion on :

1) The Changing Role of Homemaker in household.
2) Home management as a key to successful social management.
3) Study of Homes of different Socio-Economic levels.

Practical	-	10
Viva	-	6
Record Book	-	4
		20

CLASS XII

Full marks – 100

Theory
Full marks – 80

A) Study of the House [15M/15P]

1) The family and its housing needs.
2) Selection and planning of residential accommodation for different socio- economic levels.
3) Interior decoration and colour schemes.

B) A Good Home Maker and Ideal Home Maker [8M/5P]

1) Qualification and planning and processing of daily duties of a home maker.
2) Her personality and behaviour pattern.

C) Effective Management of a Home [15M/15P]

1) Role of planning, co-operation, guidance and evaluation in the field of home management.
2) Management and use of different resources including material, human and financial resources.

D) Operation of Family Finances [12M/10P]

1) Family budgeting and income management. Maintaining Household Accounts.
2) Family Finance : Family Credit and Investment of
   (a) Operation of
   i) Bank & Fixed Deposits
   ii) Post Office Accounts.
   iii) Savings Bank Accounts
   iv) N.S.C.
   v) Insurance
   vi) Share in Companies.

E) Care of the Child [8M/5P]

1) Place of a child in a home.
2) General management of the baby.
3) Factors and process of growth and development of children.

F) Child Development and Guidance Programme [15M/15P]

1) Study and care of children:
   a) Staying healthy and attractive through the years.
   b) Birth, infancy and maturation — the first dozen years.
   c) Puberty and growth.

d) Problems of adolescents and delinquents.

e) Mental hygiene and principle of child guidance.

G) Family Life Education for Future Home Maker [7M/5P]

1) Preparation for marital life
2) Responsibility of parenthood
3) Beginning of a family.
4) Interpersonal relationship in a family life.
5) Concept of family planning and personal health.

Practical
Full Marks - 20

1) Making layout plan of a home for ABC categories—low, middle and high income group and colour schemes.
2) Demonstration of flower arrangement and floor decoration with Alpana in the laboratory.
3) Preparing charts and models on the study of any **two** :
   a) Functions of home makers in a household.
   b) Personality factors related to successful home management.
   c) Time management and work simplification.
   d) Energy management and work simplification.
   e) Home making skills.
4) Preparing family budget of different income groups.
5) Keeping household accounts.
6) Demonstration and use of labour-saving devices and its care in the laboratory.
7) a) Preparing a chart on child development and care of infants.
   b) Preparing reading materials i.e. colour books, alphabet books, counting books, nursery rhyme books, building blocks etc. in the laboratory.
8) Visiting health centres and family planning centres, orphanages, social welfare agencies.
9) Any **one** of the projects :
   a) Project on the study of marriage customs of different communities.
   b) Project on study of rural homemaker and urban homemaker.
   c) Submission of project on—
   i) Educative instrumental material for children.
   ii) Project on the different types of kitchen.
   iii) Kitchen garden and use of composit pit.

Seminars and Group Disscussions

A) Home and family life in a changing world.
B) Marriage and personal adjustment.
C) Responsibility of planned parenthood.
D) Home Maker — Rural and Urban.

Group Survey

1. A Sample study on the choice of some consumer goods purchased by housewife/housewives of different social levels.
2. Evaluation of some home management practices in terms of work simplification principles.

Practical	-	**10**
Viva	-	**6**
Record Book	-	**4**
		20

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS
[P] = NUMBER OF PERIODS

NUTRITION

CLASS XI

Full marks – 100

THEORY
Full marks – 80

A. An introductions to Nutrition [15M/10P]

1) Basic concepts about food nutrition and health.
2) Role of food in the maintenance of good health.

B. Nutrients and Nutritive Processes and concepts of Calorie [30M/40P]

1) **Nutrients in food and food supplying them**
2) **Carbohydrates in nutritions** – elementary principles.
3) **Protein and amino acid** — their functions and requirements elementary principles, quality of food protein, animal vs vegetable protein — elementary principles.
4) **Fats and oils in nutrition** — elementary principles.
5) **Vitamins and minerals** — Source, functions and requirements, elementary principles.
6) **Water balance** — elementary principles.

C. Cookery and Kitchen Sanitations [15M/10P]

1) Methods of cooking and their effects on nutritive value of foods—measures for the prevention of loss of nutrients.
2) Planning of an ideal kitchen.

D. Nutrition in Everyday Meal [20M/20P]

1) Daily food pattern
2) Basic food groups and study of different foods : cereal, pulses, legumes, roots and tubers, leafy and other vegetables, meal, fish, egg and milk and milk products, fats and oils, sugar and jaggery.
3) Nutritional allowances for Indians.
4) Balance diet for different age groups and occupations.

PRACTICAL
Total Marks - 20

1) Practice using weights and measures.
2) Cooking of cereals in various way and evaluation of results.
3) Milk and egg preparations.
4) Planning and preparation of a supplementary meal for school children.

CLASS XII

Full marks – 100

THEORY
Full marks – 80

A. Nutritive Process [30M/30P]

1) Utilization of food by the body : digestion, absorption and metabolism.
2) Energy requirement during rest, different physical activities and different physiological conditions, e.g. growth, pregnancy and lactation.

B. Dietetics and Diet Planning [30M/30P]

1) Balance diet for pregnant and nursing mother.
2) Feeding of infants—breast feeding vs. artificial feeding. Infant weaning food.
3) Defective feeding of infants as a cause of malnutrition.

4) Formulation of low cost balance diet from locally available foods.
5) Preparation of simple therapeutic diets.
6) Methods of food preservation.

C. Nutrition for the community [20M/20P]

1) The common deficiency diseases in India: Protein calorie malnutrition, vitamin A malnutrition, anaemia, goitre, etc.
2) Supplementary feeding for vulnerable groups.
3) Nutrition education for the community including cooking demonstrations.
4) Methods of survey of food consumptions and food habits in families.
5) Elementary idea about the current National Nutritional Programmes in India.
6) Use of food value tables and calculation of nutritive value of the diet

PRACTICAL

Total Marks - 20

1) Detection of carbohydrate, protein (albumin) and fat in food.
2) Preparation of nutritious snacks for school tiffin based on locally available food.
3) Prepare a liquid diet to alleviate diarrhoea.
4) Prepare a days diet for an average adult women, allowances for pregnant and nursing mother.
5) Carry out diet survey in a family and interpret the results in term of adequacy.

Viva	2
Practical	15
Note Book	3
	20

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS
[P] = NUMBER OF PERIODS

FINE ARTS AND CRAFTS

CLASS XI

STANDARD CURRICULAM

Group-A

Practical

Full marks – 100

Drawing **[15M/20P]**

a) Drawing from nature, such as Foliage, Flower, birds, animals etc.
b) Drawing from Copy book (Rupabali)

Painting **[20 M/20P]**

a) Study from nature in colour, (Foliage, Flowers, still life)

Modelling **[20M/20P]**

a) Free Modelling in clay of Animals, Birds, Fish, Fruits in round and relief.

or

Group-B

Wood Crafts **[20M//20P]**

a) Engraving
b) Fretwork

STANDARD (THEORY)

Group-A

Indian Arts **[15M/15P]**

General background of Indian Art—constraints of Indian Art Development. Evaluation of Indian Art—Sculpture.

1. Maurya Dynasty (320 B.C.-115 B.C). Sculpture and Architectural Monuments in stone.
   Two groups (a) Court Art of Asoka (b) Native Art. Reference to be made to six Edict pillars of Asoka. Remains of great palace at Patuliputra (Patna)
2. Gandhara
   Kushan Dynasty (30 B.C. - 250 A.D) Mathura Sculptures.
3. Ambravati
   Gupta Period (320-600 A.D.)
   This period is reckoned as the Great Age of Indian Art. References are to be made to Sarnath, Mathura, Ajanta, Nalanda, Elora.

Group-B

Western Art (concept & Development) **[15M/15P]**

(Concept and development of Western Art)

I. Renaissance (1500-1520 A.D)

Country	*Artist's Name*
Italy	*Giotto* 1. Death of St. Francis. 2. Madonna and Child enthroned. *Leonardo da Vinchi* 1. Last Supper at Milan. 2. The Virgin of the Rocks. 3. Giokanda 4. Monalisa Raphael 1. Transfiguration La Madona.

II. Mannerist (1520 - 1600 A.D)

Country	*Artist's Name*	*Exhibits*
Italy	Michel-angelo	1. Pieta 2. Creation of Adam 3. Last Judgment
	Titian	1. Bachus and Ariadne. 2. Madona.
Germany	*Hulbein* (younger)	Madona of Burgo-master Meyer

Crafts **[15M/10P]**

1. Preparation of common clay
2. Wood crafts.

(a) Characteristics, uses and habit of Mehogony, Sal, C.P. Teak, Gamver, Holud, Oon, Kanthal, Mango.

(b) Uses of various types of hand tools and equipments.

CLASS XII

STANDARD CURRICULAM

Practical

Group-A

Full marks – 100

Drawing **[15M/20P]**

a) Drawing from STILL LIFE such as,—vases and simple objects with Casts cubs etc.

b) Drawing from nature,—Landscape and Architecture.

Painting **[20M/20P]**

a) Study from STILL LIFE in Colour.

b) Composition in colour, Landscape in Colour.

Modelling **[20M/20P]**

Bas-relief composition with moulding and casting in Plaster.

or

Group-B

Decorative design for various motifs in colour,—Batik and Painting Pottery **[20M/20P]**

STANDARD (THEORY)

Group-A

General background of Indian Art — Constraints of India Art Development. Evaluation of Indian Art—Sculpture. **[15M/15P]**

1. Medieval Period (700-1600 A.D.)
   (a) Orissa (Ganga Dynasty)—Brahminical Art. Reference : Bhubaneswar, Puri, Konark Temples. Art of Hoyesala, Mamallapuram. Pala and Sena Dynasties—Metal Sculpture.
2. Mughal Period (1550-1800 A.D.)
   Advent of Persian Art and Painting during the time of Akbar, Jahangir and Shahjahan.
3. Rajput Painting :
   Religions painting designed on events of Lord Krishna, Siva, Vishnu. Musical Ragas—Ragamalas. A few Notable artists of Bengal : Abanindranath, Gaganendranath, Nandalal Bose, Jamini Roy.

Western Art (Concept Development) **[15M/20P]**

I. Baroque and Rococo (1600-1780 A.D.)

Country	Artist's Name	
Italy	Barnini	Ecstasy of St Theresa
	Van Eycks	Altarpiece of Lamb Rainbow.
Flemish	Rubens	a.Judgment of Paris b.Landscape with Rainbow.

2. Classicism, Romanticism, Realism (1800-1818 A.D.)

Britain	Turner	Rain, steam, speed
	Constable	Huywein
France	Delacorix	Massacre of Sios

3. Impressionism to Modern Art (1800 onwards)

France	Manet	Olympia
	Monet	Homes of Parliament
	Renoir	Luncheon of the boating Party.

Crafts **[15M/10P]**

Theory

1. Batik—Methods and materials, use of Batik colours.

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

MUSIC

CLASS XI

Full marks – 100
Theory - 45
Practical - 55

Theoretical
Group-A (Marks - 23)
Group - B (Marks - 22)

Group - A

Theoretical **[23M/19P]**

1. Brief history of Hindustani Music and life sketches from the list given below : [7M/8P]
   - a) Ostad Sadarang.
   - b) Faiz Khan.
   - c) Ostad Inayat Khan.
   - d) Hafez Ali Khan
2. Description and function of the following Instruments : [6M/6P]
   - a) Surbahar
   - b) Esraj
   - c) Sarode
3. Definitions of : [4M/2P]
   - a) Grama
   - b) Matra
   - c) Laya
4. Knowledge of writing any one of Hindusthani system of Notations :
   Khayal Vocal : Both slow and fast in Ektal and Trital respectively. [6M/3P]
   - a) Todi
   - b) Brindabani Sarang
   - c) Iman Kalyan.

   or *Instrumental* :
   Mashidkhani and Razzakhani Gats in Trital.
   - a) Iman Kalyan
   - b) Brinda Bani Sarang
   - c) Hameer
   - d) Bhupali

Group - B

Rabindra Sangeet and other Music [22M/14P]

1. *Rabindra Sangeet* : [5M/2P]
   - a) Akar Matrik Notation.
   - b) Life sketch of Rabindranath Tagore (Covering Music compositions)
     - ক) বাল্যজীবনে সংগীতের প্রভাব
     - খ) বিষয় বৈচিত্র্য
2. *Other Types of Music* : [6M/4P]
   - a) Life sketch of any one of the following (Covering music compositions)
     - i) Rajani Kanto Sen
     - ii) Dwijendra Lal Roy [6M/4P]
3. *History of any of the following* : [5M/4P]
   - a) Baul
   - b) Kirton

Practical **[55M/55P]**

Group - A	-	23
Group - B	-	22
Viva voce	-	10
		55

Group - A

Vocal : **[23M/18P]**

1. *Khayal* : Both slow and fast in Ektal and Trital respectively. [13M/12P]
   - a) Raga Todi
   - b) Raga Brindabani Sarang
   - c) Raga Iman Kalyan

   or *Instrumental* :
2. Mashidkhani and Razzakhani Gats in Trital. [10M/6P]
   - a) Raga-Iman Kalyan
   - b) Brindabani Sarang
   - c) Hameer
   - d) Bhupali

Group - B

1. *Rabindra Sangeet :* [12M/42P]
N.B. Few Songs suggested according to the syllabus.
   a) *Types :* Drupad, Khayal, Original, Baul and Styles Kirton, Bhanusingher Padabali
   b) *Tals :* Chowtal, Ektal, Teora, Kaharba, Dadra, Jhampak, Sasthi, Rupakara.
   c) *Paryas :* Puja, Prem, Prakriti, Bichitra, Anusthanik, Swadesh
2. *Other types of Music* [5M/4P]
   a) Rajani Kantor Gaan
   b) Dwijendra Geeti
3. [5M/9P]
   a) Baul
   b) Kirton (in Chhoto Dashkushi or Teot)

N.B. Few songs suggested according to the syllabus mentioned here :

১। আজি কোন্ ধন হতে
পূজা/চৌতাল/মিশ্র কেদার/ধ্রুপদাঙ্গ/স্বঃ বিঃ-২২

২। শক্তিরূপ হেরো তাঁর
পূজা / চৌতাল / ইমন / ধ্রুপদাঙ্গ/স্বঃ বিঃ-২২

৩। মোরে বারে বারে ফিরালে
পূজা/একতাল/নট-মল্লার/খেয়ালাঙ্গ/স্বঃ বিঃ-২৪

৪। হে মোর দেবতা
পূজা / ঢিমা একতাল / ইমন কল্যাণ / স্বঃ বিঃ-৩৭

৫। চপল তব নবীন আঁখি দুটি
প্রেম / ঝম্পক / খম্বাজ / স্বঃ বিঃ - ৩

৬। পাখি বলে চাঁপা আমারে কও
বিচিত্র /ঝম্পক /মিশ্র ভৈরবী/কীর্তনাঙ্গ/স্বঃ বিঃ-৩০

৭। শুভ কর্মপথে ধর নির্ভয় গান
স্বদেশ / কাহারবা / স্বঃ বিঃ - ৪৭

৮। হায় অতিথি, এখন কী হল
প্রেম / ষষ্ঠী / ভৈরবী / স্বঃ বিঃ - ১৩

৯। শরত আলোর কমল বনে
প্রকৃতি / রূপকড়া / মিশ্র ভীমপলশ্রী / স্বঃ বিঃ - ৩৩

১০। যদি তারে নাই চিনি গো
প্রকৃতি / তেওড়া / খম্বাজ / স্বঃ বিঃ - ৬

১১। যখন এসেছিলে
প্রেম / তেওড়া / কাফী / স্বঃ বিঃ - ৩০

১২। আমারে কে নিবি ভাই
পূজা /দাদরা / মিশ্র কীর্তনাঙ্গ / স্বঃ বিঃ - ২৮

১৩। কোন ভীরুকে ভয় দেখাবি
পূজা / দাদরা / মিশ্র কাফী / বাউলাঙ্গ /স্বঃ বিঃ-২

১৪। আমার নাইবা হল
বিচিত্র / দাদরা / মিশ্র বাউল কীর্তন /স্বঃ বিঃ - ১০

১৫। ফিরে চল মাটির টানে
আনুষ্ঠানিক / দাদরা / মিশ্র বাউলাঙ্গ / স্বঃ বিঃ - ১৫

১৬। আয় আয়রে পাগল
বিচিত্র / দাদরা / খাম্বাজ / বাউলাঙ্গ / স্বঃ বিঃ - ১৬

১৭। সজনি সজনি রাধিকালো
ভানুসিংহের পদাবলি/একতাল/মিশ্র / স্বঃ বিঃ-২৯

১৮। আমার মুক্তি আলোয় আলোয়
পূজা/ তেওড়া / মিশ্র কেদার / স্বঃ বিঃ - ৫

CLASS XII

Full marks – 100
Theory - 45
Practical - 55

Theoretical
Group-A (Marks - 23)
Group - B (Marks - 22)

Group - A

Theoretical **[23M/21P]**

1. Brief history of Hindustani Music and life sketches from the list given below: [7M/10P]
   a) Mian Tansen
   b) Amir Khusro
   c) Pandit Sri Krishna Narayan Ratanjhankar.
   d) Ostad Allauddin Khan
   e) V.N. Bhatkhande

2. Description and function of the following instruments : [6M/6P]
   a) Tambura
   b) Tabla-Bayan
   c) Sitar
3. Definitions of : Swara, Raga, Murchhana, Tala [4M/2P]
4. Knowledge of writing any one of the Hindusthani system of Notations.
   Either *Vocal* : Khayal Both slow and fast in Ektal and Trital respectively [6M/3P]
   a) Kedara
   b) Multani
   c) Bahar
   or Instrumental Mashidkhani and Razzakhani Gats in Trital
   a) Kedara
   b) Purabi
   c) Bhimpalashri

Group - B

Rabindra Sangeet and other Music [22M/16P]

1. Rabindra Sangeet. [11M/6P]
   i) Akar Matrik notation [5M/2P]
   ii) Life sketch of Rabindranath Tagore (Covering music compositions) [6M/4P]
   ক) সংগীত শিক্ষক
   খ) রবীন্দ্র সৃষ্ট তাল—ঝম্পক, ষষ্ঠী, রূপকড়া, নবতাল, একাদশী, নবপঞ্চতাল।
2. Other Types of Music : [11M/10P]
   i) Life sketch of any one of the following (Covering music compositions) [6M/6P]
   a) Atul Prasad Sen
   b) Kaji Nazrul Islam.
   ii) History of any one of the following : [5M/4P]
   a) Bhatiali.
   b) Kirtan.

CLASS XII

Practical

Group - A – 23

Group - B – 22

Group - C – 10

Group - A

1. Vocal or Instrumental [23M/18P]

Vocal

Kheyal—both slow and fast in Ektal and Trital respectively.
a) Kedara
b) Multani
c) Bahar

or

Instrumental

Mashidhkani and Razzakhani Gats in Trital.
a) Kedara
b) Purabi
c) Bhimpalashri

Group - B

Rabindra Sangeet and other Music [22M/49P]

1. Rabindra Sangeet [12M/36P]

Total Number of songs to be learnt on the basis as indicated below :

a) Types—Dhrupad, Kheyal, Original, Western, Baul and styles—kirtan, Bhanusingher Padavali. [21P]
b) Tals—Choutal, Ektal, Teora, Kaharba, Dadra, Jhampak, Sasthi, Rupakra, Nabatal. [9P]
c) Paryas—Puja, Prem, Prakriti, Bichitra, Anusthanik, Swadesh. [6P]

2. Other types of Music [10M/13P]

i) a) Atul Prasadi [4P]
   b) Nazrul Geeti
ii) a) Bhatiali [9P]
   b) Kirtan

N.B. Few songs are suggested according to the syllabus mentioned previously :

১। বাণী তব ধায় অনন্ত গগনে
পূজা / চৌতাল/ আড়ানা / ধ্রুপদাঙ্গ / স্বঃ বিঃ - ২৪

২। মন্দিরে মম কে আসিলে
পূজা/ একতাল / আড়ানা / খেয়ালাঙ্গ /স্বঃ বিঃ - ৪

৩। প্রভু আমার প্রিয় আমার
পূজা / ঢিমা একতাল / কেদারা / স্বঃ বিঃ - ৩৬

৪। সীমার মাঝে অসীম তুমি
পূজা / ঢিমা একতাল / ছায়ানট / স্বঃ বিঃ - ৭

৫। নিবিড় অমা তিমির হতে
প্রকৃতি / ঝম্পক / খাম্বাজ / স্বঃ বিঃ - ৫

৬। এবার তোর মরা গাঙে
স্বদেশ / কাহারবা / ভাটিয়ালি / স্বঃ বিঃ - ৪৬

৭। অগ্নিশিখা এস এস
আনুষ্ঠানিক / কাহারবা / ইমন কল্যাণ /স্বঃ বিঃ - ৩০

৮। শ্যামল ছায়া নাইবা গেলে
প্রকৃতি / ষষ্ঠী / ভৈরবী / স্বঃ বিঃ - ৩৯

৯। নিবিড় ঘন আঁধারে
পূজা / নবতাল / সাহানা / ধ্রুপদাঙ্গ / স্বঃ বিঃ - ৪

১০। কেন সারাদিন ধীরে ধীরে
প্রেম / রূপকড়া / মিশ্র ভীমপলশ্রী / স্বঃ বিঃ - ৩৩

১১। আমার মল্লিকাবনে—
প্রকৃতি / দাদরা / মিশ্র কীর্তনাঙ্গ/ স্বঃ বিঃ - ৫

১২। আমার দোসর যে জন
প্রেম / দাদরা / পিলু / বাউলাঙ্গ / স্বঃ বিঃ - ৩৪

১৩। তোমরা যা বল তাই বল
প্রকৃতি / দাদরা / মিশ্র কীর্তনাঙ্গ / স্বঃ বিঃ - ১৪

১৪। পুরানো সেই দিনের কথা
প্রেম / একতালা / স্কচ-ভূপালি / স্বঃ বিঃ - ৩২

১৫। গহন কুসুমকুঞ্জ মাঝ
ভানুসিংহের পদাবলি / একতাল / স্বঃ বিঃ - ২৯

১৬। এমনি করেই যায় যদি দিন
বিচিত্র / তেওরা / পূরবী / স্বঃ বিঃ- ১৬

১৭। জয় তব বিচিত্র আনন্দ
পূজা / তেওরা / বৃন্দাবনীসারং / স্বঃ বিঃ ৩৬

১৮। তুমি কোন্ পথে যে এলে
প্রকৃতি / দাদরা / মিশ্র কীর্তনাঙ্গ / স্বঃ বিঃ - ১৬

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

AGRONOMY

CLASS – XI

Full Marks – 100

Theoretical
Full Marks – 80

1. Weather, Climate and Seasons : Factors of weather affecting Crop growth, Crop distribution, Crop seasons, broad classification of crops according to their uses. [10M/10P]

2. Soils : Definition of soil; factors of soil formation, physical properties of soil affecting plant growth – soil texture, structure, bulk density, soil water. [10M/10P]

3. Cultivation : Land selection, tillage, sowing, cultivation, harvesting and uses of different kinds of farm implements. [10M/10P]

4. Crop production : fibre (jute), tuber (potato), pulses (gram), oilseed (mustard), fodder (maize & berseem). [20M/20P]

5. Irrigation and Drainage : sources and different methods of irrigation, role of irrigation and drainage in crop production, important methods of drainage. [16M/16P]

6. Concepts of mixed, specialized and subsistence farming, Crop rotation, inter, multiple and relay cropping. [14M/14P]

Practical
Full Marks – 20

1. Acquaintance with common farm implements and their operations. Dismantling and assembling of mould-board plough, seed drill, wheel-hoe and rotary weeder. [5M]
2. Measurement and record of temperature & rainfall. [2M]
3. Seed testing and seed dressing. [1M]
4. Determination of soil texture by feel method. [1M]
5. Familiarity with different crop production operations (seedling raising, transplanting etc.) in the important crops consistent to the theory course. [3M]
6. Acquaintance with the cultivation of important crops. [2M]
7. Allotment of plots, for growing crops by individual. [5M]
8. Visit to important agricultural, horticultural, animal production farms. [1M]

CLASS – XII

Full Marks – 100

THEORETICAL
Full Marks – 80

1. Growth of crop; concept of field components; growth stages of crops; preliminary concept of the development physiology related to growth of crops such as rice, wheat, potato and jute. [10M/10P]
2. Major and minor plant nutrients and their availability to plants; soil organic matter and soil organisms, soil reaction and ion exchange; saline, sodic and acid soils, soil erosion and its control. [15M/15P]
3. Manures and Fertilizers : Role of manures and fertilizers in crop production, important manures and fertilizers – compost, farm yard manure, green manure, oil cake, ammonium sulphate, urea, calcium ammonium nitrate, super phosphate, Potassium sulphate, mixed fertilizers – their properties and uses. [15M/15P]
4. Crop production and propagation : Cereals (rice and wheat), sugarcane, banana, mango, tomato, brinjal. [15M/15P]
5. Crop protection : Nature of damage due to pests, diseases and weeds, insect pests, diseases, weeds and methods of their control; protection against rodents; precautions required to handle pesticidal chemicals. [15M/15P]
6. Law of diminishing returns in fertilizer use, special features of rainfed and irrigated agriculture. Cost of production of crops and important farm operations like ploughing, weeding, harvesting, threshing etc. [10M/10P]

Practical
Full Marks – 20

1. Identification of different manures and fertilizers. Acquaintance with different methods of fertilizer application. Study of the effects of fertilizers and other agricultural chemicals on crop growth and yield. [5M]
2. Familiarity with different crop production operations (seedling raising, transplanting etc.) in the important crops consistent to the theory course. [3M]
3. Identification of different farm weeds, important diseases, insect pests and their damages, handling of hand sprayer and duster. [3M]
4. Construction of manure pit. Raising of green manure crops for green manuring. [3M]
5. Acquaintance with the cultivation of important crops according to the theory course. [2M]
6. Students' practice of budding, inarching & Goote making. [4M]

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

SANSKRIT

CLASS XI

Full Marks 100

Group-A

Prose and Drama	–	**40**
Poetry Text	–	**10**

Group-B

Comprehension text	–	**5**
Translation	–	**10**
History of Classical Sanskrit Literature	–	**15**
Grammar	–	**20**

Prose and Drama [40M/40P]

1) चतुर्णा पण्डितमूर्खानां कथा (पञ्चतन्त्रम्)
2) श्रीमती (अवदानशतकम्)
3) दानवीरः कर्णः (कर्णभारम्)

Poetry Text [10M/10P]

1) वर्षवर्णनम् (Sl. 1-15 as in the prescribed text रामायणम्)

Group-B

Comprehension test [5M/5P]

(Strictly from पञ्चतन्त्र and हितोपदेश excluding the selected pieces).

Translation [10M/10P]

From Sanskrit into English or Bengali or Hindi.

History of classical Sanskrit Literature [15M/15P]

i) रामायण, महाभारत (Epic)
ii) पञ्चतन्त्र, हितोपदेश, कथासरितसागर (fables)

Grammar [20M/20P]

i) सन्धि - स्वर, व्यञ्जन
ii) शव्दरूप-नर, मुनि, पति, सखि, साधु सुधी, दातृ, भ्रातृ, जी, लता, जरा, मति, नदी, श्री, स्त्री, स्त्री धेनु, वधु, भु, दुहितृ, फल, वारि, अक्षि, मधु, वणिज्, सम्राज्, धावल्, श्रीमत्, महत्, गुणिन्, पथिन, आत्मन, कर्मन, सर्व, चल, तद्,एतद्, इदम्, किम्, युष्मद्, अस्मद्, द्वि, त्रि, चतुर्, पञ्चत्,षट्, अष्टन्
iii) धातुरूप--(भादि) भू, वद्, सेव्, स्मृ, वृत्, जम्, दृश्, स्था, दा, खाद्, (तुदादि) इष्, स्पृश्, प्रच्छ, मृ (अदादि) पा, इन्, (स्वादि) श्रु, आप (दिवादि) जन्, (तनादि) कृ, (क्र्यादि) ग्रह्, (ह्रादि) भी।

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

CLASS XII

Full Marks 100

Group-A

Prose and Drama	–	**35**
Poetry Text	–	**15**

Group-B

Translations (from English or Bengali or Hindi into Sanskrit)	–	**10**
Translation (from Sanskrit into Eng. or Beng. or Hindi	–	**10**
Historyof Class Literature	–	**15**
Grammar	–	**15**

Prose and Drama **[35M/40P]**

1) हासविद्यकथा (पुरुषपरीक्षा)
2) वीरवरकथा (हितोपदेश)
3) दुर्वाससः शापः (अभिज्ञान-शकुन्तलम्)

Poetry Text **[15M/10P]**

1) गीता (Chap. XI, Slokas 15-25, These slokas have been printed in the prescribed text 'Sanskrita Pathamanjari' with the nos. 1-11)

Group-B

Translation **[10M/10P]**

From English or Bengali or Hindi into Sanskrit.

Translation **[10M/10P]**

From Sanskrit into English or Bengali or Hindi.

History of Classical Sanskrit Literature **[15M/15P]**

i) Epic भास, कालिदास
ii) Prose Romance— दण्डी, वाणभट्ट
iii) Lyrics— मेघदुत, गीतगोविन्द

Grammar **[15M/15P]**

i) समास-अव्ययीभाव, तत्पुरुष, वहुव्रीहि, द्वन्द्व।
ii) कृत्प्रत्यय-क्त, क्तवतु, क्त्वाच, क्तिन, ल्यप्, तुमुन्, तृण्, शतृ, शानण्, अनद्, तव्य, अनीय, पत्, ण्यत्, क्यप्, अव, घज्।
iii) तद्धित्-त्व, तल्, इष्टन्, ईयसुन्, अण्, ढक्, इन्, वतुय्, मतुप्, ठक्, तरप्, तमप्, आत्मनेपदविधान, परस्मैपदविधान, सनन्त, यनन्त, णिजन्त, नामधावु, स्त्रीप्रत्यय।

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

PALI

CLASS XI

Full Marks - 100

Prose	–	30
Poetry	–	30
Grammar (Text Oriented)	–	30
Letter writing, amplification Story writing etc. in Pali	–	10
Total Marks		100

Prose [30M/30P]

1. Birth of Prince Siddhattha
2. The Four Omens.
3. Mahabhinikkhamanam.
4. Sujata's offering.
5. Siddhattha Vanquishes Mara

Poetry [30M/30P]

1. Rejoicing at Siddhattha's Birth.
2. Gathas of Mahapajapati Gotami.
3. Mettanisamsam.
4. Gathas of Malunkyaputta

Grammar (Text Oriented) [30M/30P]

Letter-writing, Amplification, Story writing etc. in Pali [10M/10P]

CLASS XII

Full Marks - 100

Prose	–	30
Poetry	–	30
Grammar (Text Oriented)	–	20
Substance or Precies in Pali	–	10
Translation in Pali	–	10
Total Marks		100

Prose [30M/30P]

1. The First Sermon.
2. Dedication of Nanda and Rahula.
3. Dedication of Jetavana.
4. Devadatta Plots against Buddha.
5. How Buddha consoled Kisagotami.

Poetry [30M/30P]

1. Nimiraja-Cariya.
2. Dananisamsam.
3. Pathama Dhammasamgiti.

Grammar (Text Oriented) [20M/20P]

Substance or Precies in Pali [10M/10P]

Translation in Pali [10M/10P]

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

PERSIAN

CLASS XI

Fulll Marks :100

Prose – 30
Translation (from the text)–20
Substance (from Tarikh-i- Adabiyyat-i-Iran and or Kalila-wa Dimna)–10

Poetry – 60
Translation (from text)–20
Short notes (any three)–15
Life of poets and writers–15
Explanation (poetry) or –10
Amplification

Grammar - 10
(Noun, Adjective, Verb Genitive and Derivative)

Total Marks 100

Prose [30M/30P]

1. Kalia wa Dimna (31-35)
2. Nigaristan (44-46)

Poetry [60M/60P]

1. Muntakhabe Kulliyat-i-sadi
2. Translation (unseen)
3. Substance (")

Grammar [10M/10P]

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

CLASS XII

Fulll Marks :100

Prose – 20
Translation (from the text)

Poetry – 55
Translation (from text)–20
Explanation (from the text)
(Any three)–15
Life of poets and writers
(included in the text)–15
Short notes on poets, writers and books–10

History of persian Literature – 15
Critical questions on poets and writers (any one)

Grammar – 10

Total Marks 100

Prose [20M/20P]

1. Akhalaque-Muhsini (p. 1-17)
2. Hamesha Bahar (47-61)

Poetry [55M/55P]

1. Intekhabi-i-Asháre Amir (122-134)
2. Rubaiyyat-e-Iqbal (162-176)
3. Shurá Maásir (177-185)

History of Persian Literature [15M/15P]

An outline of the history of Persian literature.

Students are expected to be familiar with the bare outlines of the History of Persian Literature only. Persian literature under the Samanids to the death of Jani. (i.e. A.H. 216 to A.H.898) with special reference to important poets and prose writers of the period.

Grammar [10M/10P]

Analysis and Parsing

ARABIC

CLASS XI

Full marks – 100

Prose	30
Poetry	20
Amplification	10
History of Arabic Language and literature	20
Grammar and Composition	20

Prose [30M/25P]

Classical

Poetry [20M/25P]

a) Classical
b) Modern

Classical Prose :

1. Text-Book prescribed : University Arabic Selection, published by Calcutta University. Third edition : 1968.
   The Following pieces :
   a) Majaniul-Adab (pp. 107-121)
   b) Wafijatul Ajan (pp. 174-189)

Classical Poetry :

Text-Book prescribed same as under (1) above
a) Al-babuth Thalith (pp. 224-230)
b) Al-babus Sabi (pp. 273-282)

Modern Poetry :

2. Text-Book prescribed : B.S. Pass Arabic Selection (Part II poetry) published by Calcutta University. First edition : 1963
   a) Hafiz Ibrahim (pp. 231-234)

Amplification [10M/8P]

a) Amplification or substance of an Arabic passage or quotation to be given in Arabic.

History of Arabic Language and literature [20M/22P]

a) Pre-Islamic and Islamic period.

Grammar and Composition [20M/20P]

a) Topics for Higher Arabic Grammar Orthography (Sarf)
   i) Noun : Number Dual, Regular, Plural, Irregular Plural, and Plural of Plurals.
   ii) Verb : Important of verbs and their characteristics.
   iii) Pronouns : Personal, Affixed, Demonstrative and Relative.

CLASS XII

Full marks – 100

Prose	30
Poetry	20
Translation	10
History of Arabic Language and literature	20
Grammar and Composition	20

Prose [30M/30P]

a) Classical
b) Modern

Poetry [20M/20P]

a) Classical
b) Modern

Classical Prose :

1. Text-Book prescribed : University Arabic Selection, published by Calcutta University. Third edition : 1968.
   The Following pieces :
   a) Surah Taha (pp. 16-27)
   b) An Nawadiru Lil Qalubi (pp. 74-91)

Modern Prose :

2. Text-Book prescribed : B.A. Pass Arabic Selection (Prose Part-II) Published by Calcutta University, First edition : 1968
   a) Nahadatul Lughatil Arabiya (pp. 299-318)

Classical Poetry :

Text-Book prescribed same as under (1) above
   a) Al-babul Awwal (pp. 207-213)
   b) Al-babuth Thane (pp. 213-224)

Modern Poetry :

Text-Book prescribed same as under (1) above
   a) Al-babul Ashir (omitting 2nd poem pp. 322-330)

Translation [10M/8P]

a) Translation of an English/Vernacular passage into Arabic.

History of Arabic Language and literature [20M/22P]

a) Umaiyad and Abbaside period.

Grammar and Composition [20M/20P]

a) Syntax :
   i) Verbal sentence (Jumla Feliya)
   ii) Nominal sentence (Jumla Khabaria)
   iii) Five objects (Mafail-e-Khamsa)
   iv) Circumstantial Adverb (Al-Hal)
   v) Specificative Adverb (AT-Tamiz)

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

FRENCH

CLASS XI

1.	Translation from seen prose text the prescribed syllabus (one passage out of two)	– 10
2.	Quote from memory (poetry)	– 10
3.	Explanations from prose or poetry text	– 10
4.	Substance and literary appreciation (prose and poetry)	– 15
5.	Composition (story writing)	– 10
6.	Grammar	– 20
7.	Viva Voce	– 25
	Total Marks	100

Prose

The following selected texts are to be studied

Author	*Text*
Perrault	Le petit Chaperon Rouge
Rousseau	Une Peur d'enfant
Maupassant	Le Parapluie

Poetry

Author	*Text*
La Fontaine	La laitière et le Pot au lait
Hugo	Lorsque l'enfant parait
Gautier	Noël
Heredia	Les Conquerants

Grammar

The following topics only :

Articles, Adjectives, Pronouns, Tenses (Present, Past Indefinite, Present and Past Perfect Historical Past, Imperative, Present Conditional), Prepositions.

Composition

Story Writing

No. of Classes required (Per annum)

Theoritical Classes	:	80
Tutorial Classes	:	20
		100

CLASS XII

1.	Translation into English from prose text of the prescribed syllabus (one out of two passages)	– 8
2.	Translation into French (one out of two passages)	– 7
3.	Quote from Memory (poetry)	– 5
4.	Explanations from prose or poetry	– 10
5.	Substance and literary appreciation (prose and poetry)	– 15
6.	Composition (Essay or letter writing)	– 10
7.	Grammar	– 20
8.	Viva Voce	– 25
	Total Marks	100

Prose

The following texts are to be studied :

Author	*Text*
Stendhal	Le Requiem de Mozart
Balzac	La Mort d'un Avare
Hugo	Les Chandeliers de l'Eveque
Flaubert	Le Lepreux et St Julien l'Hospitalier
Daudet	Le Pape est mort

Poetry

Author	*Text*
Ronsard	Quand vous serez bien vieille
La Fontaine	Le savetier et le financier
Lamartine	L'Automne
Baudelaire	L'Albatros
Mallarmé	Sonnet
Apollinaire	Le pont Mirabeau

Grammar

In addition to the topics taught in class XI the followings are to be taught : Omission of articles, Future Perfect, Past conditional, Subjunctive (Present and Past) Adverbs, Narration, Change of Voice. Question Formation.

Composition

Essay or letter writing

No. of Classes required (Per annum)

Theoritical Classes	:	80
Tutorial Classes	:	20
		100

GERMAN

CLASS XI

Full Marks – 100

1. Text Book Dr. HG. Biswas : An Easy German Course: Published by Calcutta University

The following Prose texts are to be studied:

i. Die Affen und die Vögel
ii. Grille und Ameise
iii. Das Wiesel und die Brillenschlange
iv. Der beladene Esel

2. Text Book, B.B. Kulkarni and R.N. Chapekar : German Verse

The following Poems are to be studied:

i. Herder		Em Traum ist unser Leben
ii. Goethe	a.	Heidenröslein
	b.	Erlkönig
iii. Schiller		Der Handschuh
iv. Höilderlin		Da ich em Knabe war

1. Translation of Prose texts : From German into Bengali/Hindi/English **[10M/10P]**

2. Poems **[25M/25P]**

Central Idea	10M
Committing from memory	5M
Paraphrasing	10M

2 Answering Questions and explanations from Prose texts/Poems **[15M/15P]**

3. Deutsch — Em Lehrbuch für Auslinder (Tell I) — Herder InstituL

First 20 lessons with grammatical portion.

Functional grammar (To fill in the blanks) [20M/20P]

To be studied:

Introduction
German Alphabets (vowels and consonants; Dipthongs Compound letters and their pronunciation).

Nouns & Articles
Number and Gender, Personal pronouns.

Verbs
Conjugation of verbs in present and past tense. Imperative Mood. Separable and inseperable verbs

Use of Verbs
Verbs governing accusative cases. Verbs governing dativ cases. Verbs governing both accusative and dativ cases. Order of words.

Case
Declension of articles, nouns, personal and possesive pronouns.

Interrogative pronouns, Interrogative sentences, Negation, Demonstrative and reflexive pronouns. Prepositions governing accusative case only. Prepositions governing dative case only. Prepositions governing both accusative case and dative case.

Adjective
Declension of adjective

Oral Examination **[30 M/30P]**

i.	Dictation	[10M]
ii.	Questions from prescribed texts	[5M]
iii.	Questions from unseen passages	[5M]
iv.	Alltagsituationen	[10M]

CLASS XII

Full Marks—100

1. Text Book Dr. H.G. Biswas : An Easy German Course: Published by Calcutta University

The following Prose texts are to be studied:

i. Der Lowe und die Maus
ii. Der Prinz und seine drei Kameraden
iii. Das gestoblene Pferd
iv. Der begrabene Schatz

2. Text Book, B.B. Kulkarni and R. N. Chapekar : German Verse

The following Poems are to be studied:

i.	Eichendorf	Abschied
ii.	H. Heine	Du bist wie eine Blume
iii.	R.M. Rilke	Der Panther
iv.	H. Hesse	Im Nebel

1. Translation of Prose texts : From German into Bengali/Hindi/ English [10M/10P]

2. Translation of German prose passage /sentences (Unseen) [10M/10P]

3. Poems [25M/25P]

Central Idea	10 M
Committing from memory	5 M
Paraphrasing	10 M

4. Answering Questions and explanations from Prose texts/Poems [10M/10P]

5. Deutsch Ein Lehrbuch fir Auslinder (Teil I) — Herder Institut. [15M/15P]

First 20 lessons with accompanying grammatical portion.
Functional grammar (To fill in the blanks)

To be studied :

Revision of Grammar prescribed for class XI is a must. Also to include them when setting questions.
In addition to them the following chapters of grammar are to be studied.

Degree of comparison

Positive, comparative and superlative degrees

Adverb

Adverb of time, adverb of manner, adverb of place.
Conjugation and uses of model verbs.
Future Tense. Prepositions governing genitive clause. Relative pronouns. Subordinating conjunctions and complex sentences.
Future tense. Prepositions governing genitive case.
Outline of the use of Infinitive, Compound verb.
Subjunctive mood & basic idea of Active and passive voice.
Reflexive verbs and impersonal verbs.
Coordinating conjunctions.

Oral Examination [30M/30P]

i.	Dictation	10M
ii.	Questions from prescribed texts	5M
iii.	Questions from unseen passages	5M
iv.	Alltagsituationen	10 Marks

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

RUSSIAN

CLASS XI

Full Marks—100

Written Examination **[70M/70P]**

1. **Translation from Russian into English.** [20M/20P]
   Text-Book: Learning Russian (Part—I) by Nina Potapova (Lesson 14—50)

   Translation from English into Russian. [20M/20P]
   From exercises of Lesson 14-50

2. **Grammar and Comprehension** [20M/20P]

Grammar

(a) Nouns
Genders, Numbers, Cases, Declension of Nouns (Regular and irregular) in all Genders and Numbers and cases.

(b) Adjectives
Hard, soft and mixed endings in all Genders and Numbers. Comparative and Superlative Degree.

(c) Pronouns
Personal, Possessive, Demonstrative, Interrogative and Reflexive.

(d) Numerals
Cardinal and Ordinal Numerals.

(e) Verbs
Regular, Irregular, Reflexive and Reciprocal Verbs, Tenses, Aspects.

(f) Preposition and conjunctions.

Comprehension : unseen

3. **Phonetics (Base-study)** **[10M/10P]**
   Vowels & Consonants

Viva-voce **[30 M/30P]**

Examination on stress & intonation on reading of texts
General Conversation
Learning Poems by Hearts

Poem

M Yu Lermontov	*Parus*
M. Isakovsky	*Vester*
N. Zabila	*V. Shole*
A. S. Pushkin	*Zima*
S. Marshak	*Kalendr*

CLASS XII

Full Marks—100

Written Examination **[70M/70P]**

1) **Translation from Russian into English.** [20M/20P]
   Text-Book: Learning Russian (Part—II) by Nina Potapova (Lesson 51—100)

   Translation from English into Russian. [20M/20P]
   From exercises 51-100

2. **Grammar and Creative Writing** [20M/20P]

Grammar

(a) Nouns
Diminutives, Derivative—Suffixes in Nouns.

(b) Adjectives
Declension, participles as adjectives.

(c) Pronouns
Declension of all types of Pronouns. (Definite & Indefinite)

(d) **Numerals**
Declension of Numerals.
Collective numerals.

(e) **Verbs with prefixes, Suffixes and changes in the stem. Aspects (Continuation).**

(f) **Personal and Impersonal Sentences**

(g) **Active and Passive**

3. Creative writing [10M/10P]
Eassys on selected topic

Viva-voce [30M/30P]

Translation at Sight
General Conversation
Learning Poems by Hearts

Poem

M. Yu Lermontov	*Tuchki*
M. Yu Lermontov	*Utyos*
S. Marshak	*Za Peregonom*
A. S. Pushkin	*Osen*
N. A. Nekrasov	*Prosti*
S. Ecenin	*Vot Uzh Vecher*

[M/P]= NUMBER OF MARKS/NUMBER OF PERIODS

CHINESE

CLASS XI

Full Marks - 100

Written Examination [70M/70P]

1) **Translation** [40M/40P]
   Chinese to English from the prescribed Texts
   English to Chinese from the prescribed Texts
2) **Grammar** [30M/30P]
   (a) Basic introduction of Phonetics
   (b) Introduction of Radicals
   (c) Classifiers
   (d) Construction of simple sentences

Oral Test [30M30P]

(a) Short Conversation
(b) Dictation in the original scripts
(c) Reading from the Text

Text prescribed

1. Hua Yu (Pass III and IV)
   Shi Cheng Book Company, III,
   III, Argyle Street, Kaoloon
   Lin Cheng Hing Bank Building
   7th Floor, Flat-B
   593-601, Nathan Road, Hongkong
2. Elementary Chinese (Part - I)
   Gou Zi Shudian, Post Box 399
   Peking

CLASS XII

Full Marks—100

Written Examination [70M/70P]

1) **Translation** [40M/40P]
   Chinese to English
   English to Chinese
   No text books are prescribed
2) **Comprehension and Creative Writing** [30M/30P]
   (a) Comprehension of simple text
   (b) Essay, Letter and Story writing, Dialogue etc

Oral Test [30M/30P]

(a) General conversion
(b) Dictation in the Original Scripts
(c) Reading at sight

Reference Books

(a) Elementary Chinese Reader, Book one
    Foreign Language Press, Peking
(b) Modern Chinese Readers, Part - I
    Epoch Publishing House, Peking
(c) English Chinese Conversation
    Foreign Language Press, Peking
(d) Teach Yourself Chinese by Dr H.B.Wiliamson
(e) Chinese for Beginners
    Foreign Language Press, Peking
(f) Gateway to Chinese–China Reconstructs

ENVIRONMENTAL EDUCATION

Class – XI & XII
Full Marks – 100

1.Man and Environment, 2.Environment and Development, 3.Environmental Pollution and Global Issues, 4. Energy, 5.Biodiversity, 6.Environmental Management, 7.Sustainable Development 8. Sustainable Agriculture

N.B.

- ❑ A Student shall have to study Environmental Education as a compulsory subject.
- ❑ The book along will the detailed contents of the syllabus of Environmental Education will be published by the Council and communicated shortly.

(12)

SAMSAD PARICITI

Postal Registration No. WB/CC-350
Regn. No. R.N.30227/77

উচ্চ মাধ্যমিক শিক্ষা সংসদ-এর
একাদশ ও দ্বাদশ শ্রেণির বই-এর তালিকা ও মূল্য

• উচ্চ মাধ্যমিক পাঠ সঞ্চয়ন 'ক' পাঠক্রম — 'গদ্য'	৩২.০০ টাকা
• উচ্চ মাধ্যমিক পাঠ সঞ্চয়ন 'ক' পাঠক্রম — 'কবিতা ও নাটক'	২৭.০০ টাকা
• উচ্চ মাধ্যমিক পাঠ সঞ্চয়ন 'ক' পাঠক্রম — ছোটোগল্প, প্রবাদ-প্রবচন ও বাগধারা	৩৩.০০ টাকা
• উচ্চ মাধ্যমিক পাঠ সঞ্চয়ন 'খ' পাঠক্রম — গদ্য, পদ্য ও প্রবাদ-প্রবচন	১২.০০ টাকা
• H. S. English Selection Prose	৩২.০০ টাকা
• H. S. English Selection Poems & Plays	৩১.০০ টাকা
• H. S. English Selection 'A' Alternative	৬৮.০০ টাকা
• उच्च माध्यमिक हिन्दी संकलन पाठ्यक्रम 'क'	২৮.০০ টাকা
• उच्च माध्यमिक हिन्दी संकलन पाठ्यक्रम 'ख'	২৩.০০ টাকা
• संस्कृतपाठमञ्जरी	২৮.০০ টাকা
• Higher Secondary Urdu Selection Short Stories & Drama	২৮.০০ টাকা
• Higher Secondary Urdu Selection Prose & Poetry	১৭.০০ টাকা
• नेपाली पाठ सङ्कलन 'क' पाठक्रम आख्यान भाग	৩২.০০ টাকা
• नेपाली पाठ सङ्कलन 'क' पाठक्रम गद्य र कविता भाग	৩১.০০ টাকা
• नेपाली पाठ सङ्कलन 'ख' पाठक्रम	৪৫.০০ টাকা

— প্রকাশিতব্য —

পরিবেশ শিক্ষা

Environment Studies